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**BRIGHAM
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BULLETIN**

**1993-94
GENERAL
CATALOG**

USPS No. 065-120

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Directory

Please refer to last page for a campus map and key to building abbreviations. Address all inquiries as follows:

Name
Department
Campus address
Brigham Young University
Provo, UT 84602

The telephone area code for Utah is 801.

Information: Campus directory assistance, 378-INFO.

ADVISEMENT CENTERS: Raylene J. Hadley, Director, B-238 ASB, 378-4640.

Open Major, 151 SWKT, 378-3826 (Jerry L. Jensen, Supervisor).

College of Biology and Agriculture, 380 WIDB, 378-3042 (Audrey L. Megerian, Supervisor).

College of Education, 120 MCKB, 378-3426 (LuJeanne Peters, Supervisor).

College of Engineering and Technology, 264 CB, 378-4325 (Pamela Williamson, Supervisor).

College of Family, Home, and Social Sciences, 2254 SFLC, 378-3541 (Larry K. Taylor, Supervisor).

College of Fine Arts and Communications, D-444 HFAC, 378-3537 (Brenda Butterfield, Supervisor).

College of Humanities, 3078 JKHB, 378-4789 (Mary Anne Rich, Supervisor).

College of Nursing, 551 SWKT, 378-4173 (Linda Stevens, Supervisor).

College of Physical and Mathematical Sciences, 1116 TMCB, 378-6270 (Betty Lewis, Supervisor).

College of Physical Education, 205 RB, 378-3638 (Della M. Bown, Supervisor).

Marriott School of Management, 460 TNRB, 378-4285 (Eldon Bott, Supervisor).

Admission/Readmission: B-153 ASB, 378-2507.

Alumni Association: 133 ALUM, 378-2513.

Campus Visits and Tours: Guest Relations/Campus Tours, 378-4678.

Catalogs: To order a copy of either the BYU General Catalog or the BYU Graduate Studies Catalog, please contact BYU Mail Services, 296 UPB, Provo, UT 84602, telephone (801) 378-3658. Within the United States, catalogs mailed second class cost \$6.50* each, and those mailed first class cost \$10.00 each. These prices include postage and handling. VISA, MasterCard, check, or money order is accepted in payment. On campus, both catalogs can be purchased at the BYU Bookstore for \$5.00 each.

*Subject to change.

Disabled Student Support: 390 SWKT, 378-2767.

Discontinuance Office: B-150 ASB, 378-7705.

Employee Relations Office: A-293 ASB, 378-4486

Employment Office: C-40 ASB, 378-3561.

Equal Opportunity Office: A-289 ASB, 378-6878

Evening Classes: 120 HCEB, 378-2872.

Financial Aid: A-41 ASB, 378-4104.

General Education: 302 MSRB, 378-3038.

Graduate Studies, Office of: B-356 ASB, 378-4091.

Graduation Evaluation: B-268 ASB, 378-3641.

Health Center: McDonald Health Center, 378-2771.

Honor Code Office: 337 SWKT, 378-2847

Honors Program: 302 MSRB, 378-3038.

Housing: 100 SASB, 378-2611.

Independent Study: 207 HCEB, 378-2868.

International Student Support: 366 SWKT, 378-2843.

Library: 3226 HBLL, 378-2926.

Ombudsman: 447 ELWC, 378-4132.

Personal Counseling: 149 SWKT, 378-3035.

Records: B-150 ASB, 378-2631.

Registration: B-130 ASB, 378-2824.

Scholarships and Awards: Financial Aid, A-41 ASB, 378-4104.

Traffic Division: Green House, 378-3906.

Transfer Evaluation: B-268 ASB, 378-3641

Tuition and Fees: Cashiers' Office, D-155 ASB, 378-7808.

Veterans Support: B-150 ASB, 378-2768.

Admission to Brigham Young University is nondiscriminatory. The university admits persons of either sex and any color, race, creed, religion, or national origin who meet the university's academic requirements and agree to abide by its standards of behavior. Qualified students with disabilities are admitted.

The university makes every effort to ensure the accuracy of the contents of this catalog but reserves the right to make changes at any time without prior notice.

This catalog is not a contract between Brigham Young University and present or prospective students. The university reserves the right to change or discontinue graduation requirements, department majors, individual courses, instructors, and all other aspects of university operations. If colleges or majors are discontinued, or if substantial changes in requirements for degrees are made, the university will endeavor to allow students disadvantaged by the change to continue under existing programs and requirements.

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Using This Catalog

Semester System. Courses of study at Brigham Young University are offered, and credit for satisfactory completion is granted, on a semester basis.

Course Numbering System. A course's level of instruction is shown by the number assigned to it:

Course Number	Type of Course
1 to 99	Preparatory and remedial (noncredit)
100 to 299	Lower-division
300 to 499	Upper-division
500 to 599	Advanced undergraduate or graduate
600 to 799	Graduate

Credit-Hour Designations. One semester hour of credit represents a minimum of one hour of instruction per week in a semester or two hours of instruction per week in a term (e.g., a three-hour class will meet at least three hours per week). The three-number code that appears in parentheses immediately after each course title has the following significance:

First number	Semester hours of credit
Second number	Class hours of lecture, recitation, or seminar meeting per week
Third number	Laboratory hours required per week or hours of field study or individual research per week, beyond the hours shown in the second number

Abbreviations and Symbols. The following abbreviations and symbols are used in the course listings:

Arr.	Credit, class, or laboratory hours arranged
ea.	Credit-hour designation applies to each registration
H	Course offered through the University Honors Program.
M	Designates an Honors major course.
R	Designates a course that may be repeated for credit. Two R courses with the same number on a transcript are treated as two independent courses. If an R course is repeated to raise the grade received, the grade will be

	averaged, because it is assumed that the subject matter varies from time to time.
+	Cross-referenced course—one that originates in one department but may count for credit in another.
(19—)	Date faculty member was hired

Semesters Offered. The following abbreviations are used following the credit hour designation on each course:

F	Fall semester
W	Winter semester
Sp	Spring term
Su	Summer term
Alt. sem.	Alternate semester
Alt. term	Alternate term
Alt. yr.	Alternate year
Even yr.	Even year
Odd yr.	Odd year
1st blk.	First block
2d blk.	Second block
On dem.	On demand

Departments

Aerospace Studies	Aeros
Agronomy and Horticulture	AgHrt
American Heritage	AHtg
American Sign Language	ASL
Animal Science	AnSc
Anthropology	Anthr
Art	Art
Biology	Biol
Botany and Range Science	Botny, Range
Business Management	BusM
Chemical Engineering	ChEn
Chemistry	Chem
Civil Engineering	CivE
Clothing and Textiles	CITx
Communications	Comms
Computer Science	CS
Dance	Dance
Design	Des
Economics	Econ
Educational Leadership	ELdr
Educational Psychology	EPsy
Elementary Education	EIEd
Electrical and Computer Engineering	ECEn
Engineering and Technology Education	EngT
English	Engl
Family Sciences	FamSc
Food Science and Nutrition	FSN

Geography	Geog
Geology	Geol
Health Sciences	Hlth
History	Hist
Honors Program	HonP
Humanities	Hum
Classics	Clscs
Classical Civilization	CICv
Comparative Literature	CLit
Instructional Science	IS
International Studies,	
David M. Kennedy Center for:	
American Studies	AmSt
Asian Studies	Asian
Canadian Studies	Canad
European Studies	Europ
International and Area Studies	IAS
International Relations	IntR
Latin American Studies	LtAm
Near Eastern Studies	NES
Languages	
Afrikaans	Afrik
Arabic	Arab
Bulgarian	Bulgn
Cantonese	Cant
Chinese	Chin
Czechoslovakian	Czech
Danish	Dansh
Dutch	Dutch
Finnish	Finn
French	Fren
German	Germ
Greek	Greek
Greek Modern	GrkM
Hebrew	Heb
Hindi	Hind
Hungarian	Hung
Icelandic	Iclnd
Italian	Ital
Japanese	Japan
Korean	Korea
Latin	Latin
Norwegian	Norwe
Polish	Polsh
Portuguese	Port
Russian	Russ
Scandinavian	Scand
Serbo-Croatian	SrbCr
Spanish	Span
Swedish	Swed
Thai	Thai
Ukrainian	Ukrai
Vietnamese	Viet
Law School	Law
Linguistics	Ling
American Sign Language	ASL

Using This Catalog

Austronesian Languages	AstLg	Microbiology	Mcbio	Social Work	SocW
North, Central, and South		Military Science	MilS	Sociology	Soc.
American Indian		Music	Music	Statistics	Stat
Languages	AmILg	Native American Studies	NAS	Student Development	StDev
Teaching English as a		Nursing	Nurs	Technology Education and	
Second Language	ESL	Organizational Behavior	OrgB	Construction Management	CM,TecE
Welsh	Welsh	Philosophy	Phil	Theatre and Film	ThF
Management		Physical Education	PE	Zoology	Zool
Communications	MCom	Physical Science	PhyS		
Managerial Economics	ManEc	Physics and Astronomy	Phscs		
Manufacturing Engineering		Psychology	Psych		
and Engineering Technology:		Political Science	PLSc		
Electronics Engineering	EET	Public Management,			
Technology		Institute of	PMgt		
Manufacturing		Recreation Management			
Engineering	MFE	and Youth Leadership	RMYL		
Manufacturing		Religious Instruction:			
Engineering		Ancient Scripture	RelA		
Technology	MET	Church History and			
Manufacturing		Doctrine	RelC		
Engineering and		Secondary Education	ScEd		
Engineering		School of Accountancy and			
Technology	MFET	Information Systems			
Mathematics	Math	Accounting	Acc		
Mechanical Engineering	MeEn	Information Systems	ISys		

Interdisciplinary Courses. Interdisciplinary courses are taught in several areas.

Advanced Undergraduate Courses. Advanced undergraduate courses (500 series) may be used for graduate credit with certain limitations.

Roman Numerals. In each academic department entry all degree programs are listed and the requirements for each degree are specified. Roman numerals are used to group requirements, but the divisions created by their use often have no special significance.

University Calendar

The annual calendar at BYU includes two semesters and two terms. Fall semester 1993 begins the week prior to Labor Day and ends before the Christmas holidays. Winter semester is from early January to late April. Spring and summer terms begin in late April and late June, respectively. Registering for spring and summer terms allows students to accelerate their progress in many degree programs.

Fall Semester 1993

F	Jan 15 1993	Last day new freshmen (including international students) may submit applications for the Benson Scholarship
M	Feb 15	Last day new freshmen (including international students) may submit applications for fall semester 1993 admission
M	Feb 15	Last day new freshmen may submit applications for academic scholarships and for performance and talent awards
Sa	Feb 27	Last day international graduate applicants may submit completed applications for fall semester 1993 admission
M	Mar 1	Financial aid priority processing date for Pell Grants, Stafford Loans, and BYU loans for fall semester 1993, winter semester 1994, spring term 1994, and summer term 1994
M	Mar 1	Last day continuing undergraduate students may submit scholarship applications for fall semester 1993 and winter semester 1994
Th	Mar 15	Last day transfer and former BYU students (including international students) may submit admission/scholarship applications for fall semester 1993 admission
Th	Apr 1	Last day to submit ecclesiastical endorsement without a late fee
Sa	May 15	Last day for U.S., Canadian, and permanent-resident graduate applicants, as well as international graduate applicants living in the U.S., to submit completed applications for fall semester 1993 admission
Th	Jul 1	Last day to apply for BYU short-term loans to pay fall semester 1993 tuition by the deadline
M	Aug 16	Tuition payment deadline for fall semester 1993 to avoid \$50 late fee (must be in BYU Cashiers' Office by this date)
MTW	Aug 23–25	Annual University Conference
W	Aug 25	Fall semester advance telephone registration ends at 5 p.m.
ThFSa	Aug 26–28	Orientation
F	Aug 27	Last day to pay tuition with minimum \$50 late fee
M	Aug 30	First day summer term 1993 grade reports are distributed
M	Aug 30	Classes begin. Late tuition fee increases to \$90
M	Aug 30	Late registration begins for all students who did not use the advance registration system
T	Aug 31	Last day to drop classes without a fee per class
M	Sep 6	Labor Day holiday
M	Sep 13	Last day to late register or add classes
M	Sep 13	Last day to pay tuition (with late fee)
M	Sep 13	Last day to drop a class without a W (official withdrawal) appearing on the transcript
Th	Sep 16	Last day to drop a first block class for academic reasons
F	Sep 24	Last day for graduates and undergraduates to apply and pay fee for December 1993 graduation
F	Oct 1	Last day new freshman, transfer, and former BYU students (including international students) may submit undergraduate admission/scholarship applications for winter semester 1994
M	Oct 4	Last day to officially discontinue from first block classes for nonacademic emergencies
M	Oct 4	Last day to drop a semester class for academic reasons
M	Oct 4	Last day to officially discontinue from the university without being graded
T	Oct 19	Last day of first block classes
W	Oct 20	Second block classes begin
W	Oct 27	Last day to add second block classes
W	Oct 27	Last day to drop a second block class without a W (official withdrawal) appearing on the transcript
M	Nov 1	Last day to apply for BYU short-term loans to pay winter semester 1994 tuition by the deadline
F	Nov 5	Last day to drop a second block class for academic reasons
F	Nov 5	Last day graduate students in dissertation, thesis, or selected project programs may schedule a final oral examination (defense of their work) and submit one copy of their work to the Reserve Library
F	Nov 19	Last day graduate students in dissertation, thesis, or selected project programs may have a final oral examination

F	Nov 19	Last day undergraduates may submit to the Records Office all incompletes, T grades, special exams, GE challenges, military credit, official transcripts of work completed at other schools, and any other information pertaining to December 1993 graduation
T	Nov 23	Last day to officially discontinue from the university or drop a class for nonacademic emergencies
W	Nov 24	Last day Independent Study course work and final exams may be submitted for December 1993 graduation
ThF	Nov 25–26	Thanksgiving holiday
W	Dec 1	Full payment due on BYU short-term loans for fall semester 1993
F	Dec 3	Last day graduate students may submit final copies of a dissertation, thesis, or selected project to the library copy center for binding
W	Dec 8	Last day of class instruction
ThFSa	Dec 9–11	Reading days
F	Dec 10	Last day graduate students may complete remaining degree requirements, pay fees, and submit exam results and I and T grade changes to the Office of Graduate Studies for December 1993 graduation
M–F	Dec 13–17	Final exams
F	Dec 17	Graduation (no exercises)
M	Dec 27	Last day instructors may submit fall semester 1993 grade rolls to the Records Office
T	Dec 28	Fall semester 1993 grades available on the Touch-tone telephone system

Winter Semester 1994

W	Jun 30 1993	Last day international graduate applicants may submit completed applications for winter semester 1994 admission
W	Sep 15	Last day for U.S., Canadian, and permanent-resident graduate applicants, as well as international graduate applicants living in the U.S., to submit completed applications for winter semester 1994 admission
F	Oct 1	Last day new freshman, transfer, and former BYU students (including international students) may submit undergraduate admission/scholarship applications for winter semester 1994
M	Nov 1	Last day to apply for BYU short-term loans to pay winter semester 1994 tuition by the deadline
W	Dec 15	Tuition payment deadline for winter semester 1994 to avoid \$50 late fee (must be in BYU Cashiers' Office by this date)
T	Dec 28	Winter semester advance telephone registration ends at 5:00 p.m.
Th	Dec 30	Last day to pay tuition with minimum \$50 late fee
M	Jan 3 1994	Orientation
T	Jan 4	Classes begin. Late tuition fee increases to \$90
T	Jan 4	Late registration begins for all students who did not use the advance registration system
W	Jan 5	Last day to drop classes without a fee per class
M	Jan 17	Martin Luther King Day holiday
T	Jan 18	Last day to late register or add classes
T	Jan 18	Last day to pay tuition (with late fee)
T	Jan 18	Last day to drop a class without W (official withdrawal) appearing on the transcript
F	Jan 21	Last day to drop a first block class for academic reasons
F	Jan 21	Last day for graduates and undergraduates to apply and pay fee for April 1994 graduation
T	Feb 8	Last day to officially discontinue from a first block class for nonacademic emergencies
T	Feb 8	Last day to drop a semester class for academic reasons
T	Feb 8	Last day to officially discontinue from the university without being graded
T	Feb 15	Last day new freshmen (including international students) may submit applications for fall semester 1994 admission
T	Feb 15	Last day new freshmen may submit applications for academic scholarships and for performance and talent awards
M	Feb 21	Presidents' Day holiday
T	Feb 22	Monday class instruction. No Tuesday classes
W	Feb 23	Last day of first block classes
Th	Feb 24	Second block classes begin
F	Feb 25	Last day graduate students in dissertation, thesis, or selected project programs may schedule a final oral examination (defense of their work) and submit one copy of their work to the Reserve Library
T	Mar 1	Financial aid priority deadline for Pell Grants, Stafford Loans, and BYU loans for fall semester 1994 and winter semester 1995
T	Mar 1	Last day continuing undergraduate students may submit scholarship applications for fall semester 1994 and winter semester 1995
Th	Mar 3	Last day to add second block classes
Th	Mar 3	Last day to drop a second block class without a W (official withdrawal) appearing on the transcript
F	Mar 11	Last day graduate students in dissertation, thesis, or selected project programs may have a final oral examination
M	Mar 14	Last day to drop a second block class for academic reasons
T	Mar 15	Last day transfer and former BYU students (including international students) may submit admission/scholarship applications for summer term 1994 admission

F	Mar 18	Last day graduate students may submit final copies of a dissertation, thesis, or selected project to the library copy center for binding
F	Mar 25	Last day graduate students may complete remaining degree requirements, pay fees, and submit exam results and I and T grade changes to the Office of Graduate Studies for April 1994 graduation
F	Mar 25	Last day undergraduates may submit to the Records Office all incompletes, T grades, special exams, GE challenges, military credit, official transcripts of work completed at other schools, and any other information pertaining to April 1994 graduation
W	Mar 30	Last day to officially discontinue from the university or drop a class for nonacademic emergencies
F	Apr 1	Full payment due on BYU short-term loans for winter semester 1994
F	Apr 1	Last day Independent Study course work and final exams may be submitted for April 1994 graduation
W	Apr 13	Last day of class instruction
ThF	Apr 14, 15	Reading days
Sa, M–Th	Apr 16, 18–21	Final exams
Th	Apr 21	Graduation—university commencement
F	Apr 22	Graduation—college convocations
Th	Apr 28	Last day instructors may submit winter semester 1994 grade rolls to the Records Office
F	Apr 29	Winter semester 1994 grades available on the Touch-tone telephone system

Spring Term 1994

Sa	Oct 30 1993	Last day international graduate applicants may submit completed applications for spring term 1994 admission
T	Feb 15 1994	Last day new freshman, transfer, and former BYU students (including international students) may submit undergraduate admission/scholarship applications for spring term 1994
Su	Feb 20	Last day for U.S., Canadian, and permanent-resident graduate applicants, as well as international graduate applicants living in the U.S., to submit completed applications for spring term 1994 admission
T	Mar 1	Last day to apply for BYU short-term loans to pay spring term 1994 tuition by the deadline
T	Mar 1	Last day continuing undergraduate students may submit scholarship applications for spring term 1994
T	Mar 15	Last day transfer and former BYU students (including international students) may submit admission/scholarship applications for spring term 1994 admission
M	Apr 18	Tuition payment deadline for spring term 1994 to avoid \$25 late fee (must be in BYU Cashiers' Office by this date)
F	Apr 22	Spring term advance telephone registration ends at 5:00 p.m.
T	Apr 26	College advisement center meeting for new students
W	Apr 27	Classes begin
W	Apr 27	Late registration begins for all students who did not use the advance registration system
Th	Apr 28	Last day to drop classes without a fee per class
M	May 2	Last day federal government will accept need analysis for processing federal financial aid for 1994–95 academic year
W	May 4	Last day to late register or add classes
W	May 4	Last day to pay tuition (with late fee)
W	May 4	Last day to drop a class without a W (official withdrawal) appearing on the transcript
F	May 13	Last day to drop a class for academic reasons
F	May 13	Last day to officially discontinue from the university without being graded
F	May 20	Last day for graduates and undergraduates to apply and pay fee for August 1994 graduation
M	May 30	Memorial Day holiday
Th	Jun 2	Last day to officially discontinue from the university or drop a class for nonacademic emergencies
W	Jun 15	Last day of class instruction
Th	Jun 16	Reading day
F	Jun 17	Last day graduate students in dissertation, thesis, or selected project programs may schedule a final oral examination (defense of their work) and submit one copy of their work to the Reserve Library
FSa	Jun 17–18	Final exams
F	Jun 24	Last day instructors may submit spring term 1994 grade rolls to the Records Office
Sa	Jun 25	Spring term 1994 grades available on the Touch-tone telephone system

Summer Term 1994

F	Dec 31 1993	Last day international graduate applicants may submit completed applications for summer term 1994 admission
T	Feb 15 1994	Last day new freshmen (including international students) may submit admission/scholarship applications for summer term 1994 admission
T	Mar 15	Last day transfer and former BYU students (including international students) may submit admission/scholarship applications for summer term 1994 admission
F	Apr 15	Last day for U.S., Canadian, and permanent-resident graduate applicants, as well as international graduate applicants living in the U.S., to submit completed applications for summer term 1994 admission

University Calendar

Su	May 1	Last day continuing undergraduate students may submit scholarship applications for summer term 1994
M	May 2	Last day to apply for BYU short-term loans to pay summer term 1994 tuition by the deadline
M	May 2	Last day federal government will accept need analysis for processing federal financial aid for 1994-95 academic year
F	May 20	Last day for graduates and undergraduates to apply and pay fee for August 1994 graduation
W	Jun 8	Tuition payment deadline for summer term 1994 to avoid \$25 late fee (must be in BYU Cashiers' Office by this date)
W	Jun 15	Summer term advance telephone registration ends at 5:00 p.m.
F	Jun 17	Last day graduate students in dissertation, thesis, or selected project programs may schedule a final oral examination (defense of their work) and submit one copy of their work to the Reserve Library
Sa	Jun 18	College advisement center meeting for new students
M	Jun 20	Classes begin
M	Jun 20	Late registration begins for all students who did not use the advance registration system
T	Jun 21	Last day to drop classes without a fee per class
M	Jun 27	Last day to late register or add classes
M	Jun 27	Last day to pay tuition (with late fee)
M	Jun 27	Last day to drop a class without a W (official withdrawal) appearing on the transcript
F	Jul 1	Last day graduate students in dissertation, thesis, or selected project programs may have a final oral examination
M	Jul 4	Independence Day holiday
Th	Jul 7	Last day to drop a class for academic reasons
Th	Jul 7	Last day to officially discontinue from the university without being graded
F	Jul 8	Last day graduate students may submit final copies of a dissertation, thesis, or selected project to the library copy center for binding
F	Jul 15	Last day undergraduates may submit to the Records Office all incompletes, T grades, special exams, GE challenges, military credit, official transcripts of work completed at other schools, and any other information pertaining to August 1994 graduation
F	Jul 15	Last day graduate students may complete remaining degree requirements, pay fees, and submit exam results and I and T grade changes to the Office of Graduate Studies for August 1994 graduation
F	Jul 22	Last day Independent Study course work and final exams may be submitted for August 1994 graduation
SuM	Jul 24-25	Pioneer Day holiday
T	Jul 26	Last day to officially discontinue from the university or drop a class for nonacademic emergencies
M	Aug 8	Last day of class instruction
T	Aug 9	Reading day
WTh	Aug 10-11	Final exams
Th	Aug 11	Graduation—university commencement
F	Aug 12	Graduation—college convocations
Th	Aug 18	Last day instructors may submit summer term 1994 grade rolls to the Records Office
F	Aug 19	Summer term 1994 grades available on the Touch-tone telephone system

The Mission of Brigham Young University

The mission of Brigham Young University—founded, supported, and guided by The Church of Jesus Christ of Latter-day Saints—is to assist individuals in their quest for perfection and eternal life. That assistance should provide a period of intensive learning in a stimulating setting where a commitment to excellence is expected and the full realization of human potential is pursued.

All instruction, programs, and services at BYU, including a wide variety of extracurricular experiences, should make their own contribution toward the balanced development of the total person. Such a broadly prepared individual will not only be capable of meeting personal challenge and change but will also bring strength to others in the tasks of home and family life, social relationships, civic duty, and service to mankind.

To succeed in this mission the university must provide an environment enlightened by living prophets and sustained by those moral virtues which characterize the life and teachings of the Son of God. In that environment these four major educational goals should prevail:

- All students at BYU should be taught the truths of the gospel of Jesus Christ. Any education is inadequate which does not emphasize that His is the only name given under heaven whereby mankind can be saved. Certainly all relationships within the BYU community should reflect devout love of God and a loving, genuine concern for the welfare of our neighbor.
- Because the gospel encourages the pursuit of all truth, students at BYU should receive a broad university education. The arts, letters, and sciences provide the core of such an education, which will help students think clearly, communicate effectively, understand important ideas in their own cultural tradition as well as that of others, and establish clear standards of intellectual integrity.
- In addition to a strong general education, students should also receive instruction in the special fields of their choice. The university cannot provide programs in all possible areas of professional or vocational work, but in those it does provide the preparation must be excellent. Students who graduate from BYU should be capable of competing with the best in their fields.
- Scholarly research and creative endeavor among both faculty and students, including those in selected graduate programs of real consequence, are essential and will be encouraged.

In meeting these objectives BYU's faculty, staff, students, and administrators should also be anxious to make their service and scholarship available to The Church of Jesus Christ of Latter-day Saints in furthering its work worldwide. In an era of limited enrollments, BYU can continue to expand its influence both by encouraging programs that are central to the Church's purposes and by making its resources available to the Church when called upon to do so.

We believe the earnest pursuit of this institutional mission can have a strong effect on the course of higher education and will greatly enlarge Brigham Young University's influence in a world we wish to improve.

Brigham Young University:

A Unique Environment

Religious Environment

The Church of Jesus Christ of Latter-day Saints sponsors BYU to provide a university education in an atmosphere that nurtures spiritual growth and a strong testimony of the divinity of Jesus Christ. Church programs are closely correlated at all levels with the activities of the university, and students will find many opportunities to grow spiritually.

BYU Stakes and Wards

To give students maximum opportunity to participate, the Church is organized into a number of BYU stakes composed of several wards of 200 to 300 members each. All single students living away from home who are members of The Church of Jesus Christ of Latter-day Saints become members of a BYU ward. Married students not living in university housing may attend either the BYU ward or the residential ward in which they live.

Other Religious Denominations

Approximately twenty-five other religious denominations are represented in the BYU student body. These students are encouraged to attend the congregation of their faith.

Religion Classes

All students at BYU should include regular gospel study as a continuous part of their university experience. Full-time undergraduate students need to take the equivalent of one religion class each semester of enrollment until a total of 14 semester hours in religion has been earned toward a bachelor's degree. See the Religious Education section of this catalog for more information.

Devotionals and Student-Stake Firesides

On selected Tuesdays at 11:00 a.m. throughout the year, General Authorities and other leaders of the Church speak to a general assembly of faculty and students in the Marriott Center. During spring/summer term devotionals are held in the de Jong Concert Hall, Harris Fine Arts Center. Their timely messages remind students of the importance of the spiritual dimension in

education and encourage commitment, faith, and moral behavior. In addition, Church leaders speak to students each month at a student stake fireside scheduled in the Marriott Center, usually on the first Sunday at 7:00 p.m.

Academic Environment

The academic environment extends beyond the four walls of a university classroom. Serious students seek enrichment in the library, at university forums and lectures, and through research. Some students may choose to become involved in the Honors Program or live in one of the "quiet halls" on campus—and everyone benefits from drawing on the resources available at college advisement centers.

Harold B. Lee Library

The Harold B. Lee Library contains a collection that includes over three million bound volumes and an extensive collection of pamphlets, titles on microform, and nonprint materials. Numerous professional journals and other current serials, as well as local, regional, and national newspapers, are also available. The library is a depository for United States and Canadian government documents and regularly receives publications of state and local governments. In addition, the BYU Regional Family History Library accesses the approximately 100,000 books and more than 800,000 rolls of microfilm contained in the Church's Family History Library in Salt Lake City.

The general collection and subject reference materials are on open shelves on four of the five levels—two below and two above the ground floor. The library's special collections, many of which are confined to specific subject areas, are on the fourth level, and the Manuscripts/Archives Division is located on the fifth floor. To help library users find these materials, an information booklet and library guide leaflets are available at the information desk.

The general library facilities are available to students, faculty, alumni, and other interested persons. Regularly enrolled students present their identification cards to

borrow books; others may obtain a permit from the circulation librarian. The library is open during fall and winter semesters from 7:00 a.m. to 12:00 p.m. Monday through Friday, and from 8:00 a.m. to 12:00 p.m. Saturday. During spring and summer terms the library is open from 7:00 a.m. to 10:00 p.m. Monday through Friday, and from 8:00 a.m. to 10:00 p.m. Saturday.

BYU library patrons may also use the facilities of other Utah college and university libraries and other major research libraries in the United States. These cooperative arrangements were instituted by the Utah College Library Council (UCLC) and the Research Libraries Group (RLG). The BYU Library is a participating member of both organizations.

Libraries operated by The Church of Jesus Christ of Latter-day Saints are also available to Brigham Young University students. For instance, advanced scholars may do research in the library of the Church Historical Department. Located in the LDS Church Office Building in Salt Lake City, the library is open from 8:30 a.m. to 5:00 p.m. Monday through Friday.

Learning Resource Centers (LRCs)

The learning resource centers provide an optimal learning environment for specialized, out-of-class instructional activities, usually on an individual or small-group basis, and thereby offer a wide variety of instructional alternatives to students and faculty. The library LRC serves the campus generally, and other LRCs are located in specific academic areas to serve the areas' particular needs.

University Forums

University Forums, held throughout the year on selected Tuesdays at 11:00 a.m., form an integrative and stimulating part of the General Education experience. Speakers are noted authorities in the arts, sciences, humanities, media, and government, chosen for their contributions to their field and their ability to communicate their insights. Participation in these assemblies (and in the sessions that may accompany them) prompts our inquiry into significant intellectual,

cultural, and social issues and extends our understanding of them.

New Student Orientation

The overall purpose of New Student Orientation is to assist new and transfer students to become familiar with the academic, social, and personal challenges and opportunities of Brigham Young University. Similarly, Orientation provides new students several learning opportunities to become acquainted with the resources available to them on campus. Stated another way orientation's purpose at BYU is to assist new students to form an identity with the university community.

New students begin their Orientation experience at BYU by attending New Student Commencement, which introduces them to the meaning of a university education and the purpose of higher education. In this assembly students also learn about BYU's unique mission of blending spiritual growth with intellectual development.

In smaller meetings and seminars, new students are informed of academic disciplines and such university resources and programs as the library, academic advising, scholarships, financial aid, and Honors education.

New Student Orientation also promotes the interaction of new students with peers, upperclassmen, and faculty. Y Groups, led by upperclassmen, are formed to provide more individualized attention for new students and to introduce them to the university environment. One of the many Y Group activities involves a tour of campus to acquaint new students with university facilities and traditions. As part of the Orientation program, select faculty visit with students at different locations around campus. Mingling with these faculty gives new students insight to the teaching-learning experiences of a BYU education.

Orientation at BYU attempts to balance the social, personal, and academic needs of students by carefully combining appropriate resources, activities, and personnel. It is designed to acquaint, educate, and stimulate the new student regarding the myriad opportunities available at BYU to succeed academically.

Academic Advisement

The purpose of academic advising at BYU is to help students get the most out of their education. Beginning with orientation and ending with graduation, academic advisement helps students formulate and fulfill an educational plan consistent with their abilities and interests.

The philosophy of academic advisement is to encourage students to take responsibility for their own education. To do this, advisement provides students with many aids—including college advisement centers, Advisement by Computer (ABC), Academic Information Management (AIM), and faculty

advisors. Together these components form a multidimensional advisement program designed to address the specific academic needs of students, to track and support their progress to graduation, and to enhance their overall experience at BYU.

College advisement centers exist in every academic college. At these centers students receive personal assistance in meeting their educational goals as quickly as possible. Timely advice from the centers can help students avoid complications or misunderstandings regarding major and university requirements to graduate; the centers also provide career counseling. It is a good idea for all students to contact their advisement center every semester, and students with special needs may be required to seek assistance from college advisement centers. These students include (1) seniors on academic probation, (2) seniors with no declared major, (3) students with 150 or more semester hours of credit who have not applied for graduation, and (4) students who have fulfilled all graduation requirements but have postponed graduating. These students must visit their college advisement center or departmental advisor to complete a plan for graduation—and may be prevented from registering until they do so. However, once an action plan has been filed and approved, these students will be given priority in registration to enhance their chances of obtaining the courses necessary to graduate.

Complementing the personal assistance available at college advisement centers is the university's *Advisement by Computer (ABC)*. The ABC Report tracks a student's progress toward graduation. Each semester or term all undergraduate students receive a comprehensive computerized advisement report that indicates what classes they have completed, where they stand academically, and what courses they have left to complete. Students should carefully review each ABC Report to monitor their own academic progress.

Another computer aid to advisement is the *Academic Information Management Program* or *AIM*. AIM, which is available at a number of locations across campus, provides students with easy access to up-to-the-minute information on their academic progress and other vital information. At AIM terminals students can change their address and phone numbers, apply for graduation, access their class schedule, determine course availabilities and instructor schedules, monitor their GE and major progress report (ABC), look at their grades and BYU credit, make PIN changes, check on transfer and AP credit and grades, and handle registration. As part of taking charge of their own advisement, students are encouraged to make full use of AIM and to bring any discrepancies in their record to the attention of their advisement center.

Finally, *faculty advisors* play a key role in BYU's advising program. Students should

seek out faculty advisors early in their university experience. Faculty advisors can help students understand the purposes of a university education, explore the expectations of their major, and crystalize plans for a career or further study. The advisement center will notify students who their faculty advisor is, but it is the student's responsibility to initiate contact with the faculty advisor. Students should consult the faculty advisor's office hours and go to interviews prepared to make good use of the time together. Faculty advisors can become one of the student's best resources for information, especially about the major.

Academic Support Office

All students admitted to the university are capable of succeeding academically; however, many students have difficulties achieving the level of success required. The mission of the Academic Support Office is to assist students in maintaining that level of academic success. Administered through the Counseling and Development Center, a department of Student Life, the Academic Support Office uses the combined resources of Student Life to help students resolve most academic problems.

Students with academic problems usually have difficulties in one or more of the following areas: (1) Students can experience situations outside the academic realm (i.e., adjustment problems, illness, relationship concerns, etc.) that distract from academic goals; the student may need help focusing on those goals. (2) Some students come to the university less academically prepared than other students and may need study skills training. (3) At times a student's learning style, which worked for them in high school, will not work in the university's academic environment; learning style assessment and counseling may help identify and use academic strengths more successfully. (4) Many students lack clearly defined career goals and find themselves floundering within the university; with career guidance they can move toward a more timely graduation.

Counselors are trained to assist students with time management, study skills, learning style, career choice, and other academic concerns. Students who experience academic difficulties are encouraged to contact the Academic Support Office (151 SWKT, 378-2724).

Cooperative Education and Internships

Cooperative education and internships formally integrate university-level academic study with work experience in cooperating organizations. The combined study-work experiences are offered by academic departments as an extension of regular day school programs. They are designed to complement and strengthen the student's major field of study.

In addition to cooperative education internships within the United States, internships in international settings are also available for students who are pursuing majors that focus on international curricula.

Many departments offer cooperative education and internship opportunities that give full-time students a combination of academic learning with a work practicum. Students desiring to register for cooperative education must receive prior departmental approval and complete registration before commencing an internship.

Course offerings vary according to student needs and may include registration in 199R, 299R, 399R, or 599R depending upon department and student objectives. Credit varies according to academic expectations and may range from 1 to 9 semester units. Pass/fail and/or letter grades are based upon academic as well as work performance and course enrollment. In certain circumstances, in addition to or in place of a grade, work performance will be posted in the memorandum section of the student transcript.

Most colleges and departments have cooperative education coordinators. However, for further information concerning the opportunities and benefits of this academic area, contact the university director of Cooperative Education and Internships (110 FOB, 378-3337).

Graduate Studies

To the student seeking advanced study, Brigham Young University offers a variety of graduate degree opportunities. Excellent graduate programs can be found in each of the colleges and schools, and successful completion of one results in the awarding of a master's, doctoral, or professional degree.

The doctoral degree requires the student to demonstrate an impressive scholarly competence, which includes the ability to conduct and report research in a highly effective manner. Advanced systematic study in a discipline is also essential and is followed by comprehensive examinations that require students to integrate and understand the collective knowledge of their disciplines. A dissertation resulting from independent research is defended in a concluding oral examination.

The master's degree requires advanced course work, demonstrated mastery in vital aspects of a discipline, skill in research methodology and theory, and preparation for future creative work. Integrative examinations, a major culminating piece of written work or performance, and an accompanying oral defense of that work are also required.

The professional degree likewise demands a high-level performance of students, blending scholarly insight with technical knowledge and skill.

Students who are interested in pursuing advanced degrees are encouraged to become

involved in research and creative activities during their undergraduate experience.

Research and Creative Work at BYU

One of the most exciting and valuable learning experiences available to both undergraduate and graduate students at BYU is the opportunity to participate in original research and creative work. BYU has gifted faculty members in all areas, many of whom enjoy international reputations for the quality of their creative endeavors. Many professors enlist the help of undergraduate students, who work side by side with faculty mentors and graduate students in a laboratory or studio setting. Some departments offer class credit for participation in these projects, and in other situations it is possible to receive remuneration. Equipment and research space are often of the highest quality and on the cutting edge of the discipline. By participating in such programs, students can become familiar with the most up-to-date procedures and techniques in their field. Practical experience of this kind is invaluable for bringing to life and driving home concepts learned in the classroom. Student participants leave the university with a deep understanding of their discipline and a greater appreciation of the joy of learning.

A wide variety of research experiences are available in many departments across campus. For example, the student might be involved in the synthesis of a new medicinal drug in the chemistry laboratory or participate in the discovery of a new species of dinosaur on a Colorado mesa. Other examples of programs involving student participation include the study of robotics systems, computer architecture, battery technology, high energy physics, international business methods, child psychology, drug-induced birth defects, educational methodology, molecular genetics, social implications of drug use, stability and satisfaction in marriage, Church history, and a host of other topics. Students who are interested in participating in research programs are encouraged to contact their major department chair or speak directly with individual professors.

Cultural Environment

Students can immerse themselves in culture at BYU. Dance, theatre, music, art exhibits, museums—all await to nourish the soul seeking after "anything virtuous, lovely, or of good report or praiseworthy."

Through the College of Physical Education, BYU sponsors performance groups in folk dance, ballroom dance, ballet, modern dance, and precision marching. Each year these groups perform major concerts on campus and tour throughout the world.

Popular and classical plays and films, as well as original compositions, are offered by

the Department of Theatre and Film, the College of Humanities sponsors a weekly International Cinema Program, and from September through March the Music Department presents several recitals and concerts weekly.

Museum of Art

The Museum of Art has been completed and will open fall 1993. Funded by private donors, the 100,000-square-foot museum is located directly north of the Harris Fine Arts Center. A sculpture garden separates the two buildings, and together they form a striking visual and performing arts center. The museum houses the university's superb collection of paintings, sculpture, decorative arts, works on paper, and historical musical instruments. One major body of work the university owns is by such eminent artists as Mahonri Y. Young, J. Alden Weir, Maynard Dixon, C. C. A. Christensen, and Minerva Teichert. Besides its rich array of American art, the collection encompasses all other major styles, including some rare antique prints by Rembrandt, Durer, and Daumier.

Performing Arts Series

The BYU Performing Arts Series presents some of the most celebrated artists in the world. Concerts and productions are scheduled throughout each year in the de Jong Concert Hall and Madsen Recital Hall of the Harris Fine Arts Center. Season or individual event tickets are available at reduced prices for students, faculty, and staff. For further information contact the music ticket office at 378-7444.

In recent years the Performing Arts Series has included:

Marilyn Horne, *mezzo-soprano*
Guarneri String Quartet
Alicia de Larrocha, *piano*
Canadian Brass
Earl Wild, *piano*
L.A. Philharmonic Orchestra, Zubin Mehta, *conductor*
Jerome Hines, *bass*
Vienna Choir Boys
Ballet West
King's Singers
New England Ragtime Ensemble
Utah Symphony

M. L. Bean Life Science Museum

Stanley L. Welsh, Director (290 MLBM)
Douglas C. Cox, Assistant Director (290 MLBM)

Habitat studies of local as well as exotic plant and animal species, plus a large collection of trophies from North America, Africa, and Asia, are housed in the M. L. Bean Life Science Museum.

Open Monday from 10 a.m. to 9 p.m. and Tuesday through Saturday from 10 a.m. to 5 p.m., the museum offers students a broad range of educational opportunities, from class research in the various collections to

impromptu tours for the casual visitor. Schools and civic groups are also welcome.

Museum of Peoples and Cultures

Joel C. Janetski, Director (105 ALLN)

Marti L. Allen, Assistant Director

The Museum of Peoples and Cultures houses, cares for, and performs research on archaeological and ethnographic collections from around the world. These objects date from 50,000 years ago to the present. The purpose of the museum's work is to interpret and better understand the history and culture of the peoples of the world and to share that knowledge with the scholarly community as well as the general public. The museum contains items made by the Maya, Anasazi, Fremont, Mogollon, and Casas Grandes Indian cultures. Also featured are exhibits on Egypt, Mesopotamia, Beer Sheba, and Polynesia.

Visitors may guide themselves through the gallery, or tours may be booked at least one week in advance, September through May. Located at 700 North 100 East in Provo (one block south of Brick Oven Pizza), the museum is open from 9 a.m. to 5 p.m. Monday through Friday (but closed on holidays). Office hours are from 8:00 a.m. to 12:00 p.m.

Earth Science Museum

Wade E. Miller, Director (361B ESC)
Janita Anderson, Program Director
Ken Stadtman, Curator and Collections Manager

Visitors to the Earth Science Museum (currently housed in a building west of Cougar Stadium, 1683 North Canyon Road, Provo) can view the ongoing preparation of BYU's large collection of dinosaurs and other fossils. The museum exhibits several full and partial dinosaur skeletons as well as other fossils. Through a variety of unique displays, it teaches much about past life on earth.

Recreational Environment

Students can enjoy the small-town friendliness of Provo or drive 45 miles to the north for the cosmopolitan diversity that Salt Lake City offers. Whereas Salt Lake City is home to Ballet West, the Mormon Tabernacle Choir, and the Utah Symphony, the Provo area prides itself on its own Utah Valley Symphony and several talented community choirs and theatre groups.

A Great Outdoors

The Wasatch Mountains overlook BYU on the east, and to the west lies Utah Lake. Within an hour's drive are several canyons and ski resorts, and six national parks are only a half-day away. Outdoor gear can be rented on campus for everything from skiing to windsurfing.

Athletic Facilities

BYU's athletic facilities are among the best in the nation. Complementing the major sports complexes—the Marriott Center, football stadium, baseball diamond, softball diamond, indoor tennis pavilion, and track and field stadium—are the Richards Building and the Smith Fieldhouse. The Richards Building has facilities for racquetball, volleyball, basketball, aerobics, dance, and swimming, and the Smith Fieldhouse houses ball courts, weight rooms, an indoor track, and a west annex big enough for spring batting practice.

Intramurals

The campus intramural program, consisting of more than sixty events involving thousands of participants in both men's and women's activities, is one of the largest and most comprehensive in the United States. Students may participate in team activities through a BYU ward or by forming their own team. In individual events students may enter independently or represent a housing unit or ward. The intramural program offers divisions for different skill levels in each activity and provides awards for the winners in each division. Numerous employment opportunities are available as game supervisors and officials.

Intercollegiate Competition

BYU is a charter member of the Western Athletic Conference (WAC). In fall 1990 the women's athletic program joined the men's program in the Western Athletic Conference, and the High Country Athletic Conference (HCAC) was dissolved. The schools composing the WAC for both men's and women's athletics are: Brigham Young University, University of Hawaii, U.S. Air Force Academy, San Diego State University, Colorado State University, University of New Mexico, University of Texas at El Paso, University of Utah, University of Wyoming, and Fresno State University. The men's intercollegiate program at BYU consists of twelve sports: basketball, baseball, cross-country, football, golf, gymnastics, indoor track, tennis, outdoor track and field, swimming, volleyball, and wrestling. Women at BYU compete in nine intercollegiate sports: basketball, cross-country, golf, gymnastics, indoor track, swimming and diving, tennis, outdoor track and field, and volleyball. BYU has been nationally ranked in many sports and has won national championships in football and golf.

Extramural Competition

The extramural sports program at BYU provides opportunities for students to participate on an intercollegiate level throughout the United States and Canada in team sports not designated NCAA.

One of the best organized and most respected programs in the country, BYU's

extramural sports program offers eight sports for men (soccer, alpine and nordic skiing, racquetball, lacrosse, rugby, fencing, and water polo) and seven sports for women (soccer, softball, alpine and nordic skiing, fencing, racquetball, and water polo). The men's soccer team, co-ed racquetball team, and alpine ski team have been nationally ranked during the last seven years.

Brigham Young University Honor Code

We believe in being honest, true, chaste, benevolent, virtuous, and in doing good to all men.... If there is anything virtuous, lovely, or of good report or praiseworthy, we seek after these things (Thirteenth Article of Faith).

Brigham Young University exists to provide a university education in an atmosphere consistent with the ideals and principles of The Church of Jesus Christ of Latter-day Saints. That atmosphere can be preserved through commitment to conduct that reflects those ideals and principles.

As a matter of personal commitment, students, staff, and faculty of Brigham Young University seek to demonstrate in daily living those moral virtues encompassed in the gospel of Jesus Christ, and will

Be honest
Live a chaste and virtuous life
Obey the law
Use clean language
Respect others
Abstain from alcoholic beverages, tobacco, tea, coffee, and drug abuse

Continuing Ecclesiastical Endorsement

All students must have an annual ecclesiastical endorsement. LDS students receive the endorsement from the bishop of the ward in which they reside winter semester. Non-LDS students receive the endorsement from an ecclesiastical leader of their choice or from Student Life (380 SWKT).

Requirements

All students must abide by the Honor Code and the Dress and Grooming Standards.

LDS students must fulfill their duty in the Church, attend Church meetings, and abide by the rules and standards of the Church.

The endorsement deadline is April 1 of each year.

Withdrawn Ecclesiastical Endorsement

The ecclesiastical endorsement may be withdrawn at any time by a student's ecclesiastical leader. When an endorsement is withdrawn, the student will be required to discontinue enrollment at the university. The decision to withdraw an ecclesiastical

endorsement may be appealed first to the applicable stake president. In the case of a decision adverse to the student at the stake president level, an appeal may be taken to the Honor Code Office.

Dress and Grooming Standards

The dress and grooming of both men and women should always be modest, neat, and clean, consistent with the dignity of representing Brigham Young University and The Church of Jesus Christ of Latter-day Saints.

Modesty and cleanliness are important values that reflect personal dignity and integrity, through which students, staff, and faculty of BYU represent the principles and standards of the Church. These members of the BYU community commit themselves to observe the following standards, which reflect the direction of the BYU Board of Trustees and the Church publication *For the Strength of Youth*:

Clothing should be modest in fabric, fit, and style, and appropriate for the occasion. Skirts and shorts should be knee length or lower. Clothing which is sleeveless, strapless, or revealing is not acceptable. Shoes should be worn in public campus areas.

A clean and well-cared-for appearance should be maintained. Hair styles should be clean and neat, avoiding extreme styles. Men's hair should be trimmed above the collar, leaving the ear uncovered. If worn, mustaches should be neatly trimmed. Earrings for men are unacceptable, and beards are not acceptable, except for certified medical reasons.

Residential Living Standards

As stated in its Code of Honor, Brigham Young University is committed to providing

a learning atmosphere consistent with the principles of the Church. The university is likewise committed to creating such an atmosphere for students residing in approved student housing on and off campus. To achieve this, BYU has established living standards to help students learn some of the high ideals and principles of behavior expected at Brigham Young University. Therefore, the university expects students to adhere to the following standards:

Campus Visiting Hours

Deseret Towers and Helaman Halls

Visitors of the opposite sex are permitted in the lobbies but not in the bedroom area, except during an established open house or home evening time, at which times room doors must remain open. Lobby visiting hours begin after 8:00 a.m. and extend until 12:00 midnight. On Friday night, lobby visiting hours extend until 1:30 a.m.

Heritage Halls

Visitors of the opposite sex are permitted in the lobbies and apartment kitchens but not in bedrooms or bathrooms. Lobby visiting hours are from 8:00 a.m. to 12:00 midnight Saturday through Thursday and from 10:00 a.m. to 12 midnight Friday. Apartment visiting hours are from 10:00 a.m. to 11:00 p.m. Saturday through Thursday and extend until 12:00 midnight on Friday.

Off-Campus Visiting Hours

Visitors of the opposite sex are permitted in living rooms and kitchens but not in the bedroom area in off-campus living units. Visiting hours may begin at 9:00 a.m. and extend until 12:00 midnight. Friday night visiting hours may extend until 1:30 a.m. Landlords may establish a shorter visiting period if proper notice is given to residents. This policy applies to all university-approved housing units occupied by single persons.

Conduct

All residents of university-approved housing shall be required to conduct themselves in a manner consistent with the principles of The Church of Jesus Christ of Latter-day Saints and the BYU Code of Honor. All residents and guests of residents of university-approved housing are required to abstain from possessing, serving, or consuming alcoholic beverages, tobacco, tea, coffee, or harmful drugs. Gambling, pornographic or indecent material, disorderly or obscene conduct or expressions, or disruption of the peace is not permitted in or about the premises of approved student housing.

Dress and Grooming Standards

All residents of university-approved housing are expected to know the dress and grooming standards and abide by them.

Violations

BYU students failing to maintain the BYU residential living standards will be subject to disciplinary action by the university. Apartment management and landlords are expected to make reasonable efforts to inform residents of these standards and to pursue compliance and make a report to the university where there is actual observation or notice of violation. Apartment and condominium owners failing to take reasonable steps to maintain these standards on the premises of their rental facilities or to report violations to the university may warrant revocation of university approval. Violations of these standards may be reported to the University Honor Code Office, 337 SWKT, 378-2847, or the Office of Student Housing, 100 SASB, 378-2611.

Admissions

Admissions Office (A-183 ASB, 378-2507)

All Applicants

Admissions Policy: Students of either sex and of any race, creed, religion, or national origin are accepted for admission to BYU provided they maintain ideals and standards in harmony with those of The Church of Jesus Christ of Latter-day Saints and meet the university's academic requirements. High standards of honor, integrity, and morality; graciousness in personal behavior; application of Christian ideals in everyday living; and abstinence from tobacco, alcohol, and harmful drugs are required of every student.

Important Notice: When admission applications reach the maximum number allowed by the BYU Board of Trustees (even if this occurs before the semester or term deadline date), the Admissions Office will only consider applications for the next possible semester or term.

Social Security Number: Each applicant is requested to have a social security number for identification on student records. Numbers may be obtained at the nearest social security office or local post office. The Admissions Office will assign an appropriate identification number to international students.

Full Disclosure: Failure to disclose and submit all documents required for admission, including transcripts from each institution in which the applicant has or is currently enrolled, or any falsification of information required for admission consideration may result in immediate suspension and loss of all credit earned at BYU.

Admissions Status and Academic

Standing: Admissions status (accepted or not accepted) and academic standing (good, warning, or probation) will be determined by the Admissions Committee. This review is for all applicants, including former BYU students.

Official Notice of Admissions Committee

Action: Applicants will receive written notice of the official action taken by the Admissions Committee. (Oral communication does not constitute a valid

offer of admission.) Admission can be granted only by the Admissions Office and not by any other BYU department. A letter of acceptance is valid only for the semester or term indicated. Students who wish to change the entry date specified in their letter of acceptance must request permission to do so from the Admissions Committee before the designated deadline for the entry date they desire.

Admission Deadlines: All materials must be received by the BYU Admissions Office on or before the deadline date for the semester or term in which the applicant intends to register. These dates are as follows:

Fall Semester

New freshman applicants: February 15
Transfer, former*, or graduate nondegree applicants: March 15

Winter Semester

All applicants: October 1

Spring Term

All applicants: February 15

Summer Term

New freshman applicants: February 15
Transfer, former*, or graduate nondegree applicants: March 15

*BYU day students who interrupt continuous enrollment by not attending the last full semester (fall or winter) must reapply for admission.

International students are encouraged to submit application materials at least one month before the deadline dates listed. This will allow sufficient time for the preparation of visa documents.

New Freshman Applicants—U.S.

Application: The biographical information (Part A), the ecclesiastical endorsement (Part B), the high school information and official transcripts from each school attended (Part C), the written essay (Part D), and the two letters of recommendation (Parts E1 and E2) are required of each applicant.

Application Fee: A \$25 nonrefundable application fee must accompany all applications for admission. Checks or money orders should be made payable to

Brigham Young University. (Do not send cash through the mail.)

High School Graduation: Applicants should be graduates of fully accredited high schools. Those who complete their secondary education through the General Education Development Test (GED), home study, home school, or other programs will be reviewed individually by the Admissions Committee to determine admissibility. Additional information (achievement tests, personal interview, etc.) may be required as part of the application process.

High School Preparation: Students are encouraged to complete high school courses from the following list of college-preparation courses. Of particular importance are at least three years of English composition and mathematics up through intermediate algebra. Writing and math skills are basic for critical thinking. Completing courses in the following list will assist in preparing students for university study and will be given additional consideration in admission decisions. Students who perform well in advanced placement or college preparatory classes, where available, enhance their probability of admission.

Four years of English: composition, grammar, and courses that encourage "writing to learn."

Three to four years of mathematics (two or three years beyond algebra 1): geometry, intermediate algebra, precalculus, trigonometry, calculus.

Two years of laboratory science: chemistry, physics, biology, physiology, anatomy, genetics, botany, zoology.

Two years of history or government: U.S. history, U.S. constitution, U.S. government, Civil War, world history, medieval history, ancient history.

Two or more years of foreign language (advanced skill in one language is preferred).

Two years of literature or writing: Shakespeare, classics, mythology, American literature, creative writing.

Courses such as computer science, the arts (music, drama, painting, etc.), and other worthwhile choices can prove beneficial for students, although they are not given

additional weight in the admission process. Students should be careful to take classes with substantial content that challenge them. In today's world typing and computer skills are a valuable asset. These skills should be learned in high school or independently.

LDS Seminary: Students are encouraged to participate in LDS seminary during each year of high school. Brigham Young University is committed to the concept that thoughtful and consistent study of the scriptures is vital to the preparation of those desiring to enter BYU. The number of years of LDS seminary completed (released time, early morning, or home study) will be given additional consideration in admission decisions.

Other Considerations for Admission: The Admissions Committee also considers applicants with special talent, exceptional creativity, or other unusual preparation for university study not otherwise revealed in standard admission data. In evaluating these criteria, the Admissions Committee relies on scholarship recommendations from a BYU department as a demonstration of the required talent, creativity, or unusual preparation. The Admissions Committee also uses Part D (service/leadership activities and the essay) and Parts E1 and E2 (letters of recommendation) of the application and applicants' scores (subscores and composite score) on the American College Test (ACT) in making an evaluation. The Admissions Committee may also consider such matters as mission, military service, career choices, and particular personal circumstances.

American College Test (ACT): The ACT is administered nationally five times each year (October, December, February, April, and June). Students are encouraged to take the test during the last semester of their junior year in high school. The test should be taken early enough for the results to be in the Admissions Office before the deadline for the semester in which a student intends to enroll. Test results arrive at the university approximately four weeks after the test is given. Applicants must register for the ACT at least one month in advance of the test date. Registration materials can be obtained from most high school or college counseling offices or from the American College Testing Program, P.O. Box 414, Iowa City, IA 52243, (319) 337-1278.

Early Admission

High school students who would like to be considered for admission to Brigham Young University before high school graduation must:

1. Have a cumulative high school grade point average of 3.5 (B+) or higher on all work to date.

2. Achieve a composite standard ACT score of 26 or higher.
3. Submit a letter of unconditional recommendation for early admission from their high school counselor or principal. This letter must verify the student can no longer benefit from high school attendance since high school courses do not properly challenge and motivate the student. The counselor or principal must also state that the student is academically prepared and has the emotional and social maturity to benefit from attendance at BYU.
4. Submit a letter of unconditional recommendation for early admission from the applicant's parents.
5. Complete all application requirements (see application procedures for freshman applicants).

Application deadline dates for early admission are the same as for new freshman applicants.

Concurrent Enrollment at BYU

High school students who would like to be considered for admission to Brigham Young University as a part-time student while still enrolled in high school must:

1. Have a cumulative high school grade point average of 3.6 or higher on all work to date.
2. Submit a BYU concurrent enrollment voucher signed by the applicant, the parent, and a high school counselor.
3. Have completed at least the sophomore year of high school.
4. Complete all application requirements (see application procedures for freshman applicants).

Concurrent Credit Policy: Many students are now receiving enriched high school experiences by enrolling concurrently in college courses while completing their high school curricula. BYU will consider these students for freshman admission and scholarships provided they complete no more than 31 semester/47 quarter hours of concurrent work before enrollment at BYU. This means, particularly, that they may receive consideration for BYU-sponsored National Merit and Ezra Taft Benson scholarships and for BYU Service Awards, which are based on service and leadership activities.

Students who accumulate 32 semester/48 quarter hours of concurrent work before enrollment will be considered as transfer students for admission and scholarships.

Students admitted to BYU as freshmen who before enrollment complete 32 semester/48 quarter hours of concurrent course work or who enroll at a college or university other than BYU following high school graduation will be redesignated as transfer students. Their admission and scholarship status will be reevaluated based on BYU's transfer

student criteria. Such reevaluation may result in the withdrawal of a previously awarded freshman scholarship.

College credit received for successfully completed AP examinations, CLEP examinations, or concurrent work taken at BYU is excluded from the 32 semester/48 quarter hours limit.

Concurrent course work that may receive credit at BYU includes:

1. College courses taken at a college or university campus.
2. College general education courses taken at extension centers.
3. College general education courses taken at high schools after regular hours.

BYU will *not* grant college credit for any classes taken at the high school during regular school hours.

Transfer Applicants—U.S.

Application: The biographical information (Part A), the ecclesiastical endorsement (Part B), the written essay (Part D), and the letters of recommendation (Parts E1 and E2) are required of each applicant.

Students with fewer than 32 semester hours (48 quarter hours) of transfer credit at the time of application must also submit official high school transcripts (Part C) and the results of the American College Test (ACT).

Application Fee: A \$25 nonrefundable application fee must accompany all applications for admission. Checks or money orders should be made payable to Brigham Young University (do not send cash through the mail).

Admissions Criteria: To be competitive, an applicant should have both a cumulative grade point average and a general education grade point average above the 3.0 (B) level. In addition, the majority of the transfer course work should be general education subjects (English, math, history, science, etc.). It is recommended that students transfer before beginning their junior year of college (or before completing more than 80 semester hours of course work). Additional consideration may be given to applicants with special talent, exceptional creativity, or other unusual preparation for university study not otherwise revealed in standard admissions data. In evaluating these criteria, the Admissions Committee relies on scholarship recommendations from a BYU department as a demonstration of the required talent, creativity, or unusual preparation. The Admissions Committee may also consider such matters as completing an LDS mission, military service, major selection, particular personal circumstances, and the response to Part D of the application (service/activities and the essay).

Evaluation of Transfer College Credit: All credits received at another college may be evaluated to determine admissibility of an applicant even if that credit is not accepted for transfer.

Factors on which credit will be considered to transfer to BYU include:

1. The institution is accredited by one of the following regional associations or is an institution sponsored by The Church of Jesus Christ of Latter-day Saints.

Middle States Association of Colleges and Schools

New England Association of Colleges and Schools

North Central Association of Colleges and Schools

Northwest Association of Colleges and Schools

Southern Association of Colleges and Schools

Western Association of Colleges and Schools

Credit from institutions that are candidates for accreditation by one of the associations will be reviewed on a case-by-case basis, but credit is generally not transferable.

2. Military courses are evaluated using the ACE recommendations in the upper-division baccalaureate category from the Guide to the Evaluation of Educational Experiences in the Armed Services.
3. Advanced placement scores of 3, 4, or 5 and CLEP scores of 610 or higher. Credit will be awarded according to BYU standards.

Credit awarded by other institutions for classes taught in the high schools during the regular high school day will not transfer to BYU.

Credit earned more than eight years before admission or readmission (including transfer credit) will be accepted to meet General Education and university graduation requirements, as well as major requirements at the discretion of the university. Courses should be applicable to BYU General Education and university graduation requirements as well as to major requirements. Furthermore, transfer courses with grades below C- will not be used to fill BYU General Education requirements and in most instances will not fill major requirements.

Course equivalency to BYU classes will be evaluated on all transfer credit.

Students who have been accepted into BYU and think they have obtained the necessary knowledge and skills are invited to challenge courses through individual departments at BYU for university credit.

The BYU Admissions Office will determine the transferability of undergraduate credit to BYU. A written evaluation of transfer credits is mailed to each student by the Academic Advisement Office soon after the student is accepted for admission. The evaluation indicates which classes have transferred and

will fill General Education and university graduation requirements as well as major requirements.

Former Student Applicants

BYU day students who interrupt continuous enrollment by not attending the last full semester (fall or winter semester) must reapply for admission.

Application: The biographical information (Part A) and the ecclesiastical endorsement (Part B) are required of each applicant.

Application Fee: A \$10 nonrefundable application fee must accompany all applications for admission. Checks or money orders should be made payable to Brigham Young University. (Do not send cash through the mail.)

Official Transcripts: Applicants are required to provide and identify official transcripts from each school attended since the student's last enrollment at BYU. Students will be evaluated for readmission based on their post-BYU transfer GPA and their BYU academic standing.

Transfer classes will be evaluated on a course-by-course basis. The course must be substantially equivalent to a BYU course, with a grade of C- or higher, to apply toward appropriate university or major graduation requirements.

Past Record: All holds (i.e., financial, Honor Code) placed on the student's record by BYU must be cleared before the deadline for the application to be considered. Additionally, the student must reimburse BYU for any fees incurred to collect the student's past debts.

International Student Applicants

A separate application is required for all applicants who are not citizens of the United States. Please contact the Admissions Office for international application materials.

Admissions Considerations: Criteria used by the university Admissions Committee to evaluate international students' admission to Brigham Young University are:

1. Academic performance
2. Level of education completed
3. TOEFL test results
4. ACT or SAT test scores
5. Ability to finance desired education
6. Ecclesiastical endorsement

In addition to the above, factors considered in granting admission to international transfer students are the grades or marks of all previous university and college work. If the applicant has less than one year's work at the university,

secondary school marks will also be reviewed.

An entering freshman student must send official documents showing all secondary school marks and final diploma. An official English translation of the documents is also required.

Application: The biographical information (Part A), the ecclesiastical endorsement (Part B), the written essay (Part D), the letters of recommendation (Parts E1 and E2), official transcripts, and financial information are required of each applicant. TOEFL test results are required for bilingual applicants.

Application Fee: A \$25 nonrefundable application fee must accompany all applications for admission. Checks or money orders (U.S. funds) should be made payable to Brigham Young University. (Do not send cash through the mail.)

American College Test (ACT) or Scholastic Aptitude Test (SAT) Scores: The results of these tests must be sent as part of the application materials. Test information can be obtained by writing to:

American College Test Information
P.O. Box 414
Iowa City, IA USA 52243

or

Scholastic Aptitude Test
Educational Testing Service
Princeton, NJ USA 08540

Note: The SAT is most accessible in foreign countries.

English: All bilingual applicants must send official results of the TOEFL or Michigan English tests to BYU. Students whose secondary education course work was completed in a language other than English must submit TOEFL results. Applicants need to have a total TOEFL score of 500 or higher, with no section score below 50. TOEFL scores below 500 or section scores below 50 will not be sufficient for admission consideration. Tests must be on official international test dates. Institutional tests are not acceptable.

Bilingual students who are admitted to BYU must take an English diagnostic examination during the orientation period. Based on the results of the test, a student may be required to register for one or more specific English courses, designed to improve areas of low proficiency.

Registration and Completion

Requirements: All international students in attendance must register for and complete at least 12 hours of daytime credit per semester (6 hours per term).

Official University Visa Policy: Brigham Young University will not process or enroll students entering the United States on a B visa (visitor or business). Students should not attempt to enter the United States as a

full-time student without presenting a Form I-20 (Certificate of Eligibility), a valid passport, and a valid F-1 visa from BYU.

International Transfer Students: All international students transferring from another U.S. school must report to International Student Support (350 SWKT, 378-2695) within fifteen days of school's starting.

Teacher Certification (For Students with a Baccalaureate Degree)

Applicants who have graduated with a baccalaureate degree and who are interested in obtaining initial teacher certification must have at least a 3.0 (B) grade point average to be considered. Admission, if granted, will be for specified enrollments to be determined at the time of acceptance. Applicants should complete an undergraduate application and attach a statement outlining their proposed courses and length of study. For application procedures, please refer to the preceding Transfer Applicants—U.S. and Former Student Applicants sections.

Graduate Nondegree Applicants

Applicants who have a baccalaureate degree who are interested in attending BYU as a graduate nondegree student should have at least a 3.0 (B) grade point average. Admissions priority is given to applicants who have not received a baccalaureate degree or who are applying to a graduate degree program. For applicants admitted, the number of terms or semesters of enrollment will be determined at the time of acceptance.

Registration for courses will be on a space-available basis. Applicants should complete an undergraduate application and attach a statement explaining the purpose in seeking enrollment, the courses to be taken, and the proposed length of study. For application procedures, please refer to the preceding Transfer Applicants—U.S. and Former Student Applicants sections.

Note: International applicants (unless permanent residents of the United States) cannot attend BYU as nondegree students.

Second Degree (Second Major/Additional Major)

Students who have already received a baccalaureate degree or higher from any institution, including BYU, are not eligible for admissions consideration to pursue another associate or baccalaureate degree or major.

Advanced Placement (AP) Credit

Students who complete the advanced placement examinations offered to high school seniors and score a composite grade of 3 or higher in any subject may be granted up to 8 semester hours of college credit in that subject. AP credit posted to another institution's transcript is reevaluated based on BYU's standard.

College Level Examination Program (CLEP) Credit

BYU will grant 3 semester hours of credit in each general examination in which a student scores 610 or higher. CLEP credit posted to another institution's transcript is reevaluated based on BYU's standard.

Tuition and Fees

Cashiers' Office (D-155 ASB, 378-7808)

Tuition and class fees are due and payable before a student begins class attendance. Students who fail to pay tuition by the scheduled final day to late register will jeopardize their eligibility to enroll for the following semester/term.

Any prior unpaid student account charges must be cleared before a new registration may be completed. Tuition and fees payment must be tendered in U.S. dollars.

Once students register for classes, they are officially enrolled and committed to attend. Students who decide not to come must withdraw from classes since registration will remain on their record until discontinuance is accomplished.

Classes may be dropped using the discontinuance action code (see inside front cover of the current class schedule for instructions) until midnight of the day before classes begin. On the first day of classes and thereafter students will need to contact the Discontinuance Office, B-150 ASB, 378-7705. Those who do not drop their classes will retain them on their records and will be charged tuition. Tuition will be charged from the first day of classes to the date of discontinuance at the percentage rate listed under the Refund Rate Schedule that follows on the next page.

Students who anticipate receiving financial aid will be held responsible to pay tuition charges incurred whether or not financial aid is available or forfeited.

Students are responsible to determine their correct enrollment status for tuition charges. Questions regarding tuition and fee assessment should be addressed to Financial Services (D-148 ASB). The university reserves the right to change tuition and fees without notice.

When total credit hours include a fraction, it is rounded up to the next whole hour for tuition assessment. The tuition paid as a part-time undergraduate student does not entitle the student to health service, student activity privileges, or physical education suit and facility privileges.

The charge for noncredit courses or for auditing courses is the same as for credit courses. Noncredit courses taken by part-time students will be assessed on the basis of hours involved in lecture classes. For example, 3 hours of lecture a week would be considered 3 semester hours and would be charged for accordingly. Therefore, students taking 7 credit hours plus a noncredit class

involving 2 or more lecture hours per week would be considered full-time students for tuition purposes only and be charged accordingly. For courses in which no lecture hours are involved—for example, dissertations and theses—tuition and fees will be based on hours being carried during the semester, as determined by the supervising professor.

Advanced-standing students are those who have received their first bachelor's degree (or will have received it by the beginning of the semester for which they are registering) and are not students of the Law School or the Marriott School of Management.

Full-time status for tuition assessment for all students is registration for 8.5 or more credit hours per semester or for 4.5 or more credit hours per term.

Tuition and General Fees*

Per Semester (Fall or Winter)		Per Term (Spring or Summer)	
LDS member	Non- member	LDS member	Non- member
Undergraduate Students			
Full-time			
\$1,100	\$1,650	\$550	\$825
Part-time (per credit hour)			
\$112	\$168	\$112	\$168
Advanced-Standing Students			
Full-time			
\$1,290	\$1,935	\$645	\$967
Part-time (per credit hour)			
\$143	\$215	\$143	\$215
Marriott School of Management Students			
Full-time			
\$2,100	\$3,150	\$1,050	\$1,575
Part-time (per credit hour)			
\$233	\$350	\$233	\$350
Law School Students			
Full-time			
\$2,100	\$3,150	\$1,050	\$1,575
Part-time (per credit hour)			
\$233	\$350	\$233	\$350

*A significant portion of the cost of operating the university is paid from the tithes of The Church of Jesus Christ of Latter-day Saints. Therefore, students and families of students who are tithe-paying members of the Church have already made a contribution to the operation of the university. Because others will not have made this contribution, they are charged a

higher tuition, a practice similar in principle to that of state universities charging higher tuition to nonresidents.

Tuition Adjustment—Status Change Between Part-Time and Full-Time

After classes begin, a part-time student who increases the number of credit hours and remains a part-time student must pay tuition for these additional hours *on the day they are added*. If this is not done, a late fee may be assessed. A change to full-time status requires that additional tuition be paid, plus the late fee.

A full-time student dropping to part-time or a part-time student who decreases credit hours may be entitled to a tuition refund. A refund request must be initiated by the student through the Financial Services Office (D-151 ASB). *The activity card must be surrendered at that time.* A full refund of the difference between full-time assessment and part-time assessment will be allowed until the scheduled last day for adding classes. Refunds for courses dropped after that date will be subject to the refund rate schedule listed under Tuition Charge/Refund—Discontinuance.

Late Tuition Payment Fee

Late tuition payment fees will be assessed full-time and part-time students for failure to pay tuition by scheduled deadlines. The late fee will also be assessed students who pay less than full-time tuition by the deadline but who are then or later become registered for full-time status. (See current class schedule for deadline dates.)

Semester

Before semester begins \$50

After semester begins 90

Term

After tuition deadline 25

Students whose tuition check is dishonored by the bank will be charged the late fee in effect at the time the check is redeemed.

Tuition Charge/Refund—Discontinuance

When a student officially discontinues from the university, a partial refund of tuition and fees paid may be appropriate. Any refund due will be paid by check, through the mail, approximately two weeks from the date on which the student requests discontinuance and has the activity card voided by the Discontinuance Office (B-150 ASB). Any unpaid university charges will be deducted from the refund amount.

Refunds will not be paid to students whose tuition has been paid by a university loan, scholarship, or benefit.

If a student discontinues or drops in status from full-time to part-time and has received a Stafford Loan, federal regulations require the school to return a portion of any institutional refund due the student to the lending institution through which the student received the loan.

Note: Late fees are nonrefundable.

The amount of the refund a student will receive is based on the date a student reports such discontinuance to the Discontinuance Office (B-150 ASB). The following rates apply to both tuition and class fee refunds:

Refund Rate Schedule

See current class schedule for specific dates.

	Tuition Charged	Tuition Refunded
Before 1st day of classes	None	100%
1st week of classes	10%	90%
2nd week of classes	15%	85%
3rd week of classes	20%	80%
4th week of classes	25%	75%
5th week of classes	30%	70%
6th week of classes	35%	65%
7th week of classes	40%	60%
8th week of classes	45%	55%
9th week of classes	50%	50%
10th week of classes	55%	45%
Thereafter	100%	None

Note: Exception by petition to the above refund schedule will be considered for students forced to discontinue because of medical incapacitation after the 85 percent refund period. Petition forms are in D-208 ASB.

Refunds for Class Fees

Class fee refunds are based on the same schedule as listed for tuition refunds. Those with an asterisk (*) are exceptions to this schedule and must be applied for at the respective academic department.

Class Fees

AgHrt 112	\$ 40
AgHrt 312	50
AnSc 124, 231R, 331R (equitation)	150
Army ROTC Leadership Laboratory	16
*Chemistry deposit (all labs)	30
CITx 260	10
Des 214R, 230, 232, 270, 272, 273, 330, 332, 372, 374, 375, 377R, 430, 477R	25
Des 344	75
*Geol 410	500
Germ 491	10
ISys 98	25
Ling 98	25
Math 97	75
Mcbio 442	25
MET 131	8
MET 230	10
MET 324	25
MET 335	5
MET 338	20
MET 360	2
MET 431	10
Music 249R, 349R, 449R, 649R, 697B	25
Music 160R, 260R, 360R, 460R, 560R, 660R	190
Nurs 230A, 240A, 330A, 342A, 438A, 442	12
PE 116, 117, 233 (bowling)	25
PE 124 (equitation)	150
PE 161, 162, 164, 232 (skiing)	35
PE 321	25
RMLY 123, 223, 380	20
RMYL 210	80
RMYL 400, 402 (section 1)	35
RMYL 480	100
Russ 491	10
SocW 460R	10

Student Teaching/Practicum Fees

EIEd 310R	\$ 20
EIEd 360	10
EIEd 370	15
EIEd 400	60
FamSc 424	30
ScEd 476R	100
EPsy 380, 480R, 481R	10
EPsy 581R, 582R, 584R, 586R, 680R	60
Pay above fee when applying for student teaching. An additional \$10 late fee is assessed if application is completed after March 31 for fall semester, October 31 for winter semester, or January 31 for spring and summer terms. The \$10 late fee is not refundable under any circumstances. Cancellation of the student teaching/practicum applications will result in forfeiture of one-half the fee.	

Materials/Service Fees

Fee payment cards are available in the following classes for materials and services used:

Art 103, 104, 105, 106, 107, 108, 114, 115, 116, 117, 118, 119, 120, 203, 204R, 205, 206R, 207R, 208R, 214, 215, 216, 217, 218, 219, 220, 321R, 322R, 327R, 328R, 333R, 349R, 350R, 351, 354R, 355R, 356R, 358R, 359R, 390, 421R, 422R, 423R, 427R, 428R, 450R, 451R, 456R, 459R, 494R, 578R, 621R, 622R, 627R, 650R, 656R, 659R, 697R.	
CM 155, 210, 211, 217, 218, 241, 305, 408, 411, 412, 426, 494R.	
CS 220.	
ECEn 220, 311.	
EET 103, 131, 228, 236, 322, 342, 343, 345, 443, 447.	
TecE 120, 140, 149, 150, 160, 200, 205, 209, 229, 239, 240, 250, 251, 260, 270, 281, 300, 301, 315, 319, 325, 329, 354, 360, 365, 386, 387, 388, 400, 405, 440, 450, 453, 455, 477, 489, 490R, 505, 535, 593R.	

Miscellaneous Fees and Fines

Admission evaluation fee (nonrefundable)	
New applying student	\$ 25
Reapplying student	10
Bicycle registration (Provo City license)	3
Change of registration fee (for each class dropped)	
1st day of classes	Free
2nd day of classes	Free
3rd day of classes	3
4th day of classes	4
5th day of classes	5
6th day of classes	6
7th day of classes	7
8th day of classes	8
9th day of classes	9
10th day and thereafter	10
Dishonored check charge	15
Duplicate activity card	10
Ecclesiastical endorsement late fee	20
Examination through Testing Center (to exempt a student from taking a required class)	10
Examination, special equivalency, nonrefundable fee to take exam	20
FSN-dietetics insurance and ADA dues	48
Graduation fee (nonrefundable)	
Bachelor's degree	15
Master's degree	20
Doctoral degree	25
Identification photo	3
Incomplete grade contract fee	10
National League of Nursing Diagnostic Exam	30
Physical education locker	5
Records search fee	1
Spouse activity card (nonrefundable) per semester	6
Thesis binding (four copies)	11-15

Traffic violation fines, variable according to violation	10–50
Transcript fee (pay at Records Office)	2

Health Insurance Requirement

BYU requires all full-time students (8.5 credit hours or more) to carry adequate medical insurance. Enrollment in the BYU Student Health Plan satisfies the university's insurance requirement, as does enrollment in a group medical plan provided by your employer or your spouse's or parent's employer. For any other medical insurance plan to meet this requirement, it must:

1. Provide at least 70 percent coverage for all major medical expenses, including physician, hospital, and ancillary service.
2. Have an individual annual deductible of no more than \$500.
3. Have an annual plan limit of no less than \$25,000.

If you are a full-time student, you must either enroll in the BYU Student Health Plan or provide verification of other adequate insurance coverage. Students who do not return a properly completed form to BYU before the first day of classes each semester or term will be automatically

enrolled in and assessed the appropriate premium (single or married student rate) for the BYU Student Health Plan. Insurance fees charged are due by the first day of classes.

Debt Collection Fees

Students' past-due debts are referred to Financial Services for collection. If the BYU collection officer is unable to collect the debt within a reasonable time, the debt will be referred to an outside collection agency. The student debtor will be required to reimburse the university for such collection agency fees before obtaining a release of a financial hold on his or her transcript or before being considered for readmission.

Estimated College Expenses

Educational expenses have been deliberately kept at a minimum at BYU. At a time when yearly costs at public universities average about \$5,000 and private university expenses average about \$12,000, BYU continues to offer a unique, high-quality education for much less. This is possible because of Church financial support, which covers a significant portion of the university's total expenses. A

single undergraduate student at BYU may expect the approximate following basic costs:

Fall Semester	Winter Semester	Spring Term	Summer Term
*Tuition and fees			
\$1,100	\$1,100	\$550	\$550
Board and room			
1,725	1,725	863	863
Books and supplies			
410	410	205	205
Personal expenses			
590	590	295	295
Transportation			
520	520	260	260
\$4,345	\$4,345	\$2,173	\$2,173

*Tuition for non-LDS undergraduate students is \$1,650 for each of the fall and winter semesters and \$825 for each of the spring and summer terms.

On entering the university, students are responsible for making arrangements to cover enrollment expenses and should have sufficient funds on hand for at least the first semester. University financial aid is available to supplement savings only through one or more of the following programs: scholarships and awards, student loans, Pell Grants, and student employment.

Financial Aid

Financial Aid Office (A-41 ASB, 378-4104)

Over the past decade the cost of obtaining an excellent university education has increased considerably. As a result, many students and their families have found it difficult to obtain the funds to pursue an education. The university is sensitive to this situation and to those students who are hard-pressed to finance their studies. Major changes have been made by the university to improve the delivery system through which students can receive financial aid. There is a firm commitment to assist those who truly need the resources to further their studies.

Financial aid at BYU comes from various federal, state, and university programs in the form of loans, scholarships, and grants. The Financial Aid Office coordinates these financial aid programs and assists students in identifying the financial resources for which they might qualify. Because the number of students applying for financial assistance usually exceeds the funds available through university and federal programs, the distribution of financial aid at BYU is based on an assessment of the student and family's financial need. There are some exceptions to need-based awarding: BYU academic scholarships, service, performance and talent, and athletic awards and BYU short-term loans are not based on need.

The process of determining a student's eligibility for financial aid is called *need analysis*. In a need analysis, income and asset information from both student and parents is examined to determine the family's ability to contribute toward educational costs. This figure, called the *family contribution*, is subtracted from what it will cost the student to attend BYU for a specific length of time (typically, one academic year). If the cost of education is more than the family can contribute, the student has *financial need*.

BYU uses the government need analysis form, Free Application for Federal Student Aid (FAFSA), in determining how much the student and family should contribute. All students applying for financial aid must complete this form and the BYU Financial Aid Application. The application process is not complete until the results of the FAFSA have been received by the BYU Financial Aid Office.

Even though a standard formula is used to analyze a student's financial situation, the Financial Aid Office carefully considers the

individual circumstances of each student applying for aid.

Applying for financial aid is complicated and time consuming. Considerable delays and frustrations can arise from filling out forms incorrectly or failing to submit the proper documents in a timely manner. Students and their parents are encouraged to read instructions carefully and to complete all forms and documents correctly. Professional counselors in the Financial Aid Office are available and eager to assist in answering questions and helping with the application process.

Eligibility Requirements

Any student who is admitted to BYU day school, who is in a degree-seeking program, and who is making satisfactory academic progress is eligible to apply for financial aid. Students who have their baccalaureate degree and are returning to receive a teaching certificate may also apply for financial aid if they have a 2.0 GPA and are admitted to the teacher certification program. Applicants for federal financial aid (Pell Grants, Stafford Loans, PLUS, and SLS loans) must be U.S. citizens or eligible noncitizens. Contact the Financial Aid Office if you have any questions as to your eligibility.

Academic Scholarships

Academic scholarships for *new freshmen* are based on an in-depth review of a student's academic preparation while in high school. Areas evaluated include ACT scores, grades, and the types of courses taken. College prep classes such as English, mathematics (symbol systems), American history, biology, chemistry, physics, and foreign language, along with advanced placement (AP) or honors courses taken in these areas, carry additional weight when evaluated by the University Scholarship Committee.

Students should have an American College Test (ACT) score in the upper twenties or higher, and grades in the above course work should be at the 3.7 (A-) level for serious consideration. The following scholarships and stipends are awarded to students based on these criteria:

Annual Scholarship	Duration	Stipends
Ezra Taft Benson	4 years	\$3,300
Trustees	4 years	2,200
University	1 year	2,200
University	1 year	1,100

Academic scholarships for *transfer students* are evaluated according to the academic preparation at the transfer institution. Primary factors in the evaluation include the cumulative grade point average and the grade point average on General Education or major courses, the number of courses completed per enrollment, and whether the transfer institution was a junior college, four-year college, or university. Generally, transfer applicants with a GPA of 3.75 or higher in their General Education and major course work are considered.

Academic scholarships for *continuing students* are based on scholastic record. Scholarship competition is rigorous, with applicants typically having grade point averages of 3.7 or above (on a 4.0 = A scale). In addition, there are a limited number of need-based scholarships available to continuing students that are awarded according to the level of financial need as determined by the AFSA. Students must complete the AFSA to be considered for one of these awards.

Special Scholarships

Ezra Taft Benson Scholarships: These scholarships bear the name of the President of The Church of Jesus Christ of Latter-day Saints and are awarded annually to twelve young men and twelve young women who have shown superior scholastic and personal achievement. To apply, LDS high school seniors should have a minimum unweighted grade point average (GPA) of 3.85 plus a composite ACT score of 31 or higher. Students with a cumulative GPA between 3.50 and 3.84 may still be considered if the composite ACT score is 32 or higher. Interested students should complete the admissions application process and submit a special Benson Scholarship Application Form (available from the BYU Financial Aid Office) by the January 15 deadline.

Performance and Talent Awards: These awards, given to new freshman, transfer, and continuing students, are available in the areas of art, communications, dance, design,

music, and theatre and film. They are given primarily on the basis of demonstrated talent rather than on scholastic achievements alone. Awards range in value from \$100 to full tuition and fees for one year. The application deadline for a performance and talent award is February 15. For further information and application materials, students should contact the department related to the specific talent:

Art: Department of Art, C-502 HFAC

Broadcasting, Advertising/Public Relations, and Journalism: Department of Communications, E-509 HFAC

Dance: Department of Dance, 288 RB

Design: Department of Design, 210 BRMB

Music: Department of Music, C-550 HFAC

Music Dance Theatre: Music Theatre Production Office, 22 KMB

Theatre, Cinema, and Television: Department of Theatre and Film, D-581 HFAC

Service/Leadership Awards: We offer a limited number of service/leadership awards to students who have rendered distinctive and extraordinary service and leadership to their community, church, and/or school. Students will be considered for a service award using the information provided in the Admissions, Scholarship, and Housing Application.

National Merit Scholarships: Finalists in this competition are considered for a BYU-sponsored National Merit scholarship. Students must inform National Merit Corporation that BYU is their first-choice university. National Merit Corporation will then forward their materials to BYU for consideration.

ROTC Scholarships: Both the Army ROTC and Air Force ROTC offer scholarships on a competitive basis to qualified students enrolling in their programs. ROTC scholarship students may receive full tuition, fees, books, and associated costs. In addition, both scholarship and nonscholarship students enrolled in courses numbered in the 300 and 400 series may apply for a \$100 monthly subsistence allowance. For further information and application requirements, consult the Military Science Department (Army ROTC), 320 Wells ROTC Building, or the Aerospace Studies Department (Air Force ROTC), 380 Wells ROTC Building.

Athletic Grants-in-Aid: The university awards grants-in-aid to outstanding athletes who qualify under the rules and regulations of the Western Athletic Conference (WAC) and the National Collegiate Athletic Association (NCAA). Male athletes should apply to the coach of the sport in which they participate or to the director of Intercollegiate Athletics (106 SFH). Female athletes should contact the intercollegiate women's athletic director (295 RB).

Scholarships for the Disabled: A few private awards are available specifically for disabled students. For information regarding these awards refer to the BYU Financial Aid Application.

Restricted Private Scholarships and Awards: There are some private scholarships that carry certain stipulations. Specific details and application instructions may be found in the BYU Financial Aid Application.

Alumni Association Replenishment Scholarship: The Alumni Association Replenishment Scholarship is available to junior, senior, and graduate students whose total costs of education may not be met through other financial aid programs. Up to thirty replenishment scholarships are awarded annually in amounts equal to half or full LDS tuition. These scholarship recipients will be eligible for membership in the Society of Alumni Scholars and will be asked to replenish the fund once they are in a financial position to do so. Students must meet the following qualifications to be considered:

1. Have a minimum 3.0 total and BYU GPA.
2. Demonstrate financial need.
3. Be willing to replenish the scholarship fund at a future date.

To apply, students must complete the Alumni Association Replenishment Scholarship Application available in the Financial Aid Office.

Jerusalem Center for Near Eastern Studies—Scholarships and Grants: Funds have been donated to the BYU Jerusalem Center study programs. This financial aid is administered under the following two categories:

Grants: Grants are awarded primarily on the basis of financial need, with consideration also given to academic performance. The amount of these grants will vary with the length of the program, the applicant's financial need, and the funds available.

Scholarships: Scholarships are awarded primarily on the basis of academic performance and area of study, with consideration also given to financial need. The amounts awarded will vary as stated above. For further information contact the Jerusalem Center Office (309 HCEB, 378-6017).

Study Abroad Program—Mae Covey Gardner Scholarship: Funds have been donated to Brigham Young University to assist students participating in the London and Vienna Study Abroad programs. This scholarship is awarded on the basis of academic merit and financial need. For further information contact Study Abroad (204 HRCB, 378-3308).

Native American Scholarship: The Native American Educational Outreach Program offers scholarships to Native American students in graduate and undergraduate

programs. To be eligible, applicants must be in good academic standing and demonstrate financial need. To apply, students must complete a separate scholarship application available upon request from the Financial Aid Office.

BYU Short-Term Loan

A short-term loan is available to full- or part-time day students or full-time evening students admitted to day school. A student may borrow up to the cost of tuition only, and because the loan is "short-term" the loan must be repaid during the same semester or term in which the money is borrowed. The loan is not available for Independent Study, Study Abroad, Travel Study, job interviewing, or debt payments. The loan requires a cosigner over the age of twenty-one who must be the student's parent, guardian, or other relative with the financial resources to repay the loan if necessary. The cosigner must be employed full-time, unless retired. A BYU employee or LDS Church leader may cosign only if he or she is related to the student and meets all cosigner requirements. Another student or a spouse may not cosign.

Federal Programs

Federal Pell Grant: A Federal Pell Grant is awarded by the U.S. Department of Education and is based on financial need. A Federal Pell Grant is not a loan and does not have to be repaid. Only undergraduate students who haven't already earned a bachelor's degree are eligible for a Federal Pell Grant. (Students who pay advanced-standing tuition are not eligible.) In addition, students must meet other eligibility requirements (see preceding Eligibility Requirements). Full-year Federal Pell Grants are based on an eligibility index determined by a federal formula and range between \$200 and \$2,300. Federal Pell Grant payments are disbursed to BYU students for only one semester at a time and vary with the number of hours for which a student is enrolled per semester (spring and summer terms combined are considered one semester).

12.0 or more semester hours equal a full-time payment.

9.0–11.5 semester hours equal a three-quarter-time payment.

6.0–8.5 semester hours equal a half-time payment.

Less than 6.0 semester hours equals no payment.

In determining hours for Federal Pell Grant payments, please note that:

1. Audit hours, special courses and conferences, and hours obtained by challenging classes *may not* be used.
2. Continuing Education, Salt Lake Center, Study Abroad, and Travel Study classes,

etc., *may* be used only during the term or semester for which the student is admitted to BYU day school.

3. Independent Study courses *may* be used only if the course is begun and completed during the term or semester for which the student is requesting payment.

Federal Stafford Loan: A Federal Stafford Loan is a low-interest, federally subsidized loan based on financial need. It is available to undergraduate and graduate students who meet the university eligibility requirements (see preceding Eligibility Requirements) and the federal government requirements for need as calculated by the AFSA. Federal Stafford Loan recipients must be enrolled in at least 4.5 credit hours per semester (or 2.5 credit hours per term) during the entire period of their loan. No audit hours, Independent Study hours, nor Conferences and Workshop hours may be used to meet the minimum hour requirement.

To avoid the burden of excessive debt, students should consider other forms of financial aid such as grants, scholarships, awards, part-time employment, and family assistance. Students should also contact their state educational agency to apply for state grants and other state aid that may be available. High school counselors and employers may also provide information regarding sources of financial aid. An unsubsidized Federal Stafford Loan is also available to students who do not qualify for a fully subsidized Federal Stafford Loan. Contact the Financial Aid Office for details.

Federal PLUS Loan: A Federal PLUS Loan is an educational loan that parents may obtain to meet the educational expenses of their dependent children who meet the eligibility requirements above and are enrolled in at least 4.5 credit hours per semester (or 2.5 credit hours per term) of the loan period.

A Federal PLUS Loan is neither need based nor federally subsidized. It requires credit approval by the lender. Monthly payments generally begin sixty days after the loan is disbursed. A student may receive a Federal PLUS Loan in addition to a Federal Stafford Loan.

Federal SLS Loan: A Federal SLS Loan is an educational loan that independent students may obtain to meet their educational

expenses. To be considered for a Federal SLS Loan, students must meet the eligibility requirements and be enrolled in at least 4.5 credit hours per semester (or 2.5 credit hours per term) of the loan period.

Although the Federal SLS Loan is neither need based nor federally subsidized, a student must first complete the FAFSA to determine eligibility for a Federal Pell Grant or Federal Stafford Loan. The loan requires credit approval of the lender. Monthly payments generally begin sixty days after the loan is disbursed. A student may receive a Federal SLS Loan in addition to a Federal Stafford Loan.

Satisfactory Academic Progress Policy

Federal regulations require institutions of higher education to establish minimum standards of satisfactory academic progress for recipients of financial aid. These standards must equal or exceed the academic standards for students not receiving financial aid. In keeping with these regulations, Brigham Young University has established the following policy governing satisfactory academic progress.

1. To be eligible for financial aid, students must be admitted to day school as degree-seeking students and must be in good academic standing, or, at worst, on academic warning.
2. Students on academic probation are not eligible for financial aid (See Academic Standards in the Policies and Procedures section of this catalog).
3. Undergraduate students with more than 180 credit hours are generally not eligible for financial aid.
4. Students with documented medical or family emergencies that adversely affect academic performance may petition for an exception to these requirements.

Appeals: Appeals may be made by petition to the Financial Aid Office. All petitions should provide adequate supporting documentation from physicians, counselors, instructors, etc. regarding the circumstances that caused the unsatisfactory academic performance.

Reinstatement: Students who are denied financial aid because of academic probation

may be eligible for aid once they have been restored to good academic standing (or academic warning).

Important Tax Information

Under the Tax Reform ACT of 1986 any funds received from scholarships, benefits, fellowships, and grants from BYU or any other source, which combined exceed the cost of tuition, fees, books, and required equipment and supplies, are considered taxable income. These include federal Pell Grants but not BYU and federal loans.

Since a student is required to report these awards as income to the Internal Revenue Service, it is vital to keep a detailed record (including canceled checks and/or receipts) of all expenditures for tuition, fees, books, and required equipment and supplies. Housing and food are considered nonexempt, so money spent on these items is subject to income tax.

The university is not required to withhold any amounts from award payments, so the student will be entirely responsible for any taxes that may be due the government. The law concerning taxation of scholarships and fellowships is complex. For more detailed information, students should consult with their personal tax advisor.

Exception to University Financial Aid Policy

Students desiring an exception to University Financial Aid Policy must petition the Financial Aid Committee in writing, stating the reason for the requested exception. The committee meets on a regular basis to review petitions. Forms may be obtained from the Financial Aid Office (A-41 ASB, 378-4104).

Additional Information Regarding Financial Aid

A detailed description and application instructions for each of these financial aid programs can be found in the BYU Financial Aid Application, available on request. Students with questions regarding financial aid at Brigham Young University are invited to contact the Financial Aid Office.

Housing

Housing Office (100 SASB, 378-2611)

Quality residential living is an important, indeed an integral, part of the total educational experience at BYU, and students should carefully consider the accommodations available in view of the type of living experience they desire, the time they have available for activities within their housing situation, and their economic needs. Housing is available on campus and in the surrounding communities, and programs have been established within campus residence halls and with off-campus landlords to integrate living experiences with the total university educational program.

Campus Housing

Campus housing includes room-and-board residence halls for men and women, each directed by a competent resident adult; apartment living for women and men; and family apartments. Assisting the head resident in the room-and-board areas are several resident assistants—mature, advanced students who live with the student group. Students are known personally by the staff and have someone immediately available to assist with normal student problems.

The residence hall program is designed to provide experiences in self-government, sharing relationships, and other responsibilities that encourage maturity and independence.

Residence Halls for Men and Women

Board and room in Helaman Halls and Deseret Towers is provided for both men and women. Each hall contains student, study, and ironing rooms; recreation and central shower areas; laundry and storage facilities; and a head-resident apartment. The central buildings for each feature spacious cafeterias, dining rooms, reception areas, offices, and mail service for the entire residence area. Reading and writing labs, as well as math and computer labs, are also provided in the central buildings and are staffed by teaching assistants.

Apartment Living for Men and Women

Heritage Halls provides housing for both women and men in apartment-type buildings. The majority of the apartments have a combination kitchen-dining-study room, three bedrooms, and a bath. In addition, there are large living rooms, a recreation room, and laundry and storage facilities in each building. Six people live in each apartment. The apartments are completely furnished except for bedding and kitchen items.

Help with budgeting, buying, meal planning, and the selection, care, and construction of clothing is available from specialists assigned to Heritage Halls. Residents can also request help planning social activities, developing recreational skills, and learning the wise use of leisure time.

Residences for Families

Accommodations for 1,048 student families are provided in housing developments known as Wymount Terrace and Wyview Park. Because of the demand for these facilities, applicants should submit their applications at least one year before anticipated placement. The waiting list varies depending on time of year and availability.

Wymount Terrace consists of family apartments arranged around lawn and play areas where children may enjoy themselves away from busy streets. Each apartment is furnished with an electric or gas range, refrigerator, drapes, and garbage disposal. A limited amount of furniture is available for rent from the university. Apartments in Wymount Terrace are not plumbed or wired for washers and dryers, but the area is served by five self-service laundry centers. Four apartment sizes are available, and, as in other family housing, these are assigned according to family size.

Wyview Park consists of one-, two-, and three-bedroom mobile homes placed on permanent foundations and connected to power, water, and sewer lines to provide the conveniences of permanent homes. Each unit is equipped with air cooling, laundry hookups, refrigerator, garbage disposal,

built-in gas range, carpeting in the living room and bedrooms, and built-in chests of drawers. A laundry, children's play area, adult recreation area, community assembly room, and community park are also nearby.

Foreign Language Student Residence

The College of Humanities sponsors the new Foreign Language Student Residence, located near the Missionary Training Center. Students pledge to speak only the foreign language in their apartment while they live and study together under the supervision of a faculty advisor and a native speaker.

All rooms are double rooms, and male and female students eat together, with the cost of meals included in the fees. For details write to one of the foreign language departments listed in this catalog or to the coordinator of the Foreign Language Student Residence, 4088 JKHB.

Applications for Campus Housing

Students who plan to enroll at BYU and live in a university residence hall are advised to contact the Office of Student Housing, 100 SASB, about a year in advance. As soon as the housing application is received, students should complete it, enclose the \$50 fee, and mail it back. (This fee is nonrefundable unless the student is not admitted to the university or campus housing.) Residence hall assignment and appropriate agreement forms are prepared on the basis of the date the application is received by the Housing Office.

Acceptance into the University: Validation of any campus housing reservation is contingent on the student's official acceptance and admission to the university.

Rental Agreements

Students who plan to live in campus housing will be expected to sign a rental agreement for their accommodations. They should be prepared to live by the terms of this agreement once they have acquainted themselves with its terms, signed it, and returned it to the Office of Student Housing;

this will avoid any possible misunderstanding or financial loss. Agreements are made for the academic school year.

Time of Arrival

Residence halls are not open to students before the announced opening date, which is usually the day before Orientation begins. The university does not advise students who are going to live on campus to arrive before that date.

Off-Campus Housing

Brigham Young University is committed to creating an atmosphere conducive to intellectual and spiritual development for all of its students, including those who live off campus. The BYU Off-Campus Housing Office was established to assist in this task by:

1. Aiding students in locating off-campus housing.
2. Encouraging landlords to maintain and improve rental facilities.
3. Advising and giving counsel to students and landlords in their relationships with one another.
4. Attempting to assure that BYU living standards are maintained off campus.

To help achieve these ends, single BYU students are required to live in university-approved housing (see below). At present, more than 22,000 rental spaces have been approved by the university for off-campus living. For further information concerning off-campus rentals and BYU regulations, contact the Off-Campus Housing Office at 255 ELWC between 8:00 a.m. and 5:00 p.m. Monday through Friday, or call 378-5066.

BYU Housing Referral Service

The BYU Off-Campus Housing Office maintains a complete referral service for all university-approved rental facilities. Thousands of rental units of all types have been approved. There are large apartment complexes, condominiums, duplexes, houses, basement apartments, and sleeping rooms. Housing for families is also listed. (Family housing is not subject to university approval.)

Information about current vacancies is available at the Off-Campus Housing Office.

Copies of the latest vacant rental listings and a guide with essential rental data on the large apartment complexes are available in a display case outside the office door. These lists and the renter's guide are also available for mailing upon request. Because the vacancy lists are so soon outdated, they can be faxed rather than sent through the mail. Counselors are also available to help students who have exceptional problems finding suitable off-campus housing.

University-approved Housing

Unless specifically excused by the Off-Campus Housing Office, all single BYU students are required to live in university-approved housing either on or off campus and to provide the address of their approved residence as part of the registration process. The requirement may be waived by the Off-Campus Housing Office for the following students:

1. Single parents with children.
2. Single students living with parents.
3. Single students who are the children, grandchildren, brothers, sisters, nieces, or nephews of the owner of the dwelling unit where they reside when such dwelling unit causes an integration of the sexes in the building.
4. Single students who are the roommates of the students in paragraph 3 above, provided that the occupants of the dwelling unit are all of the same sex.
5. Single students who are graduates or 25 years of age or older.
6. Under certain conditions, as determined by the Off-Campus Housing Office, the university housing requirement may be waived for other students. For example, such conditions include living with families that are relatives or friends; rendering service in exchange for room and board; and living with and caring for invalid, disabled, or elderly persons.

Married students may choose whether to live in approved housing, and owners shall not forfeit approval status if married couples are housed in approved single-student housing units.

Hotels, motels, and studio apartments are not approved housing for single students. A studio apartment is a living unit that does not provide a separate bedroom but combines the living and sleeping area.

Students who live in housing not approved by the university and who are not excused by the BYU Off-Campus Housing Office are subject to the following sanctions:

1. Future registration may be stopped and activity card privileges may be withheld until the student verifies that he or she is living in or will be living in university-approved housing.
2. Students falsifying their addresses will be subject to the above consequences as well as disciplinary action by the university for Honor Code violations.

When a student has contracted to live in a facility not approved by the university and has not been excused from the university housing requirement, these sanctions will be applied even though the student's tenancy extends beyond the current semester or term in which the student is enrolled. A student in this situation will have to either move from the unapproved housing unit, regardless of the consequences, or forego registration and other privileges at the university until complying with this policy.

The university approves off-campus living units whose owners have agreed to:

1. Adequately separate single men and women.
2. Exercise reasonable efforts to maintain BYU residential living standards.
3. Maintain the facilities in good repair.
4. Not abuse basic tenant rights.

The university cannot guarantee that owners and managers are employing their best efforts to maintain our standards, that all residents are complying with BYU standards, or that approved living units always meet our physical criteria. Thus, students are individually responsible to carefully choose an acceptable apartment and compatible roommates. Students should, of course, inform the BYU Off-Campus Housing Office if they suspect that the standards and the physical criteria are not being maintained.

Because a student's living environment has a profound influence on academic performance and spiritual growth, BYU promotes an environment in approved off-campus housing facilities that is consistent with its mission and with the moral virtues taught by The Church of Jesus Christ of Latter-day Saints. Specifically, the BYU off-campus housing program sets guidelines for landlords and students, which, if followed, will cultivate that desired moral climate. BYU Housing personnel attempt to rectify any deviations from these standards and policy guidelines.

On Choosing a Major

Not many questions are asked earlier or more often of university students than "What's your major?" Not many questions cause students greater concern. Almost all have come to the university with the strong impression that choosing a major is a serious matter with lifelong implications. On the other hand, many may believe they have not advanced far enough in the learning process to be sure they have a sound basis for making such an important choice. Identifying a few pitfalls and some simple guidelines on how to avoid them may be helpful:

I

Choosing a major based on narrow employment criteria such as earning power, prestige, and/or rapid advancement.

The best major for you will be the one that aids most in your lifelong learning process, a process unique to each individual. Look for a major you can "grow into." Respond to the intellectual opportunities of the university that will broaden and deepen skills, ideas, knowledge, expectations, and worldviews. This will help you attain a level of excellence in a broad range of analytical skills and problem-solving abilities that will be useful in any career and in other aspects of life.

When one graduates, a baccalaureate degree will be awarded by the *university*, because the degree will reflect many important aspects of the university learning

experience, in addition to a specialization. Though the major is an important component of university education, remember that it is only *one* component.

II

Choosing a major that is not challenging because you doubt your abilities.

Not understanding how much change a university education may ultimately make, many choose a major they believe will be the least challenge, even if it requires more hours. Excessively time-consuming majors, whatever the intellectual rigor, might infringe on other important aspects of the university experience.

Your major should challenge you intellectually and provide a solid base in its discipline. It should leave you with meaningful time and energy to spend in broadening educational activities required or encouraged by the university (such as Religious or General Education), in sophisticated and intriguing elective courses, and in private reading, writing, and discussion.

III

Choosing an undergraduate major to correspond directly to graduate study specialization.

Studies have shown that broadly educated individuals are more successful and satisfied with their lives than those with narrow

specialties alone. For example, in addition to students majoring in the natural sciences, those in the humanities and social sciences majors are welcome applicants for medical, law, and business schools. An excellent, well-rounded undergraduate education is the basis for postgraduate specialization.

Be concerned about how any course of study helps in the process of learning. As you grow intellectually you will discover that learning is not the same thing at advanced stages as it was at the beginning.

IV

True education depends on your ability to synthesize information and solve complex problems. Make sure the courses and the major chosen will help you rise to these higher levels of understanding. Remember, in the last analysis, it is solely *your responsibility* to get the most intensive and extensive intellectual growth possible for the investment of time, energy, and money your education will require at Brigham Young University.

If you desire help in choosing a major, contact the Open Major Advisement Center (151 SWKT, 378-3826), where advisors are available to aid you in this most important decision.

Registration

Registration Office (B-130 ASB, 378-2824)

Who May Register?

Students are eligible to register if they are either continuing BYU students or new students who have received a letter of acceptance from the Admissions Office for the semester they wish to attend.

Continuing student status ends if a student does not complete day school classes the previous full semester (fall or winter) or if a student has graduated from BYU. Students who have lost continuing student status must be readmitted by the Admissions Office (A-153 ASB) before registration materials will be processed.

The Registration Process

Complete registration instructions and deadlines are listed in the current class schedule for each semester or term. New students receive a current class schedule in the mail, and continuing students may buy one at the BYU Bookstore or Registration Office.

Beginning fall semester 1993 registration will be based on a priority system that allows students to begin registration according to their class standing and number of completed hours. Priority begins with the graduate students and seniors, then juniors, sophomores, and freshmen. Non-degree-seeking graduates will be given access after the continuing freshmen. Newly admitted freshmen will register together in a separate priority.

All eligible students will be mailed a Registration Notice for fall and winter semesters that will inform students of their beginning registration times. Following the instructions in the current class schedule, students may begin registering for fall semester in April and for winter semester in October. Spring and summer term registration will not be based on a priority system. Eligible students can register for spring and summer terms beginning in January when the current class schedule becomes available. Students have continuous access to the registration system until two working days before classes begin.

A Tuition Billing Statement with a listing of classes will be mailed to each student who has registered for at least one class by

mid-July for fall semester, mid-November for winter semester, mid-March for spring term, or mid-May for summer term. The tuition payment deadline is August 16 for fall semester 1993, December 15 for winter semester 1994, and mid-April and mid-June for spring 1994 and summer 1994 terms, respectively. Students who fail to meet tuition deadlines will lose access to the Touch-tone telephone system.

Late Registration

Students who fail to pay by the tuition payment deadline will be assessed a late fee. When a student's tuition is received before the first day of class, the Touch-tone telephone system will be made available. Beginning the first day of school, students may register for their classes by following the adding and dropping procedures outlined below. For fall and winter semesters the late tuition fee is \$50 (effective after the tuition deadline and before the first day of classes) and \$90 starting on the first day of classes. For spring and summer terms the fee is \$25 (effective after the tuition deadline).

Adding and Dropping Classes

Students may add and drop classes 24 hours a day by Touch-tone telephone up until two working days before the first day of classes. After school has started, each academic department determines how classes are added. The adding procedures of each department are noted T or S (telephone or signature) under each course listing in the current class schedule. Most departments use the following procedure:

1. Obtain a change of registration (add/drop) card from the Registration Office or a college advisement center.
2. To add a class, obtain a signature of approval from the instructor or department, as shown in the current class schedule.
3. To drop a class, complete the card, indicating the class to be dropped (no signature required).
4. After the second day of school, pay a fee to the university cashier for each class dropped. (The amount of the fee increases each day. The charges per day are printed on the add/drop card.)

5. Take the add/drop card to the Smith Family Living Center step-down lounge during the first two weeks of school and to the Registration Office, B-130 ASB, beginning the third week. Turn the card in before the appropriate deadline listed in the current class schedule.

During fall or winter semester, students may add classes during the first ten class days and drop classes during the first twenty-five class days. During spring or summer term, classes may be added during the first six class days and dropped during the first thirteen class days.

Full- or Part-Time Status

A student who registers for more than 8 credits a semester or more than 4 credits a term is full-time for tuition purposes. Registration for 8 credits a semester or less (4 credits a term or less) gives the student part-time status. International students and students receiving financial assistance may be required to register for more hours to be considered full-time.

Verification of Full-Time Status for Graduate Students

Graduate students (master's and doctoral students) who are enrolled for at least 2 credit hours per semester and who can be certified by their department as being engaged full-time in pursuit of their degrees can petition for graduate full-time status. Requests for such an exception should be directed to the Office of Graduate Studies.

Withdrawal from Classes

Students who choose to withdraw from (drop) a class must do so officially. Students who do not officially withdraw before the published deadline will receive a failing grade. Refer to the current class schedule for the appropriate procedure and deadlines.

Auditing Classes

Students who wish to audit classes (take a course without receiving any credit for it) must add the classes, listing them as audit courses, by standard add/drop procedures

within the first ten class days. Audited classes do not appear on transcripts and do not count for verification purposes.

Class Preparation Time

The expectation for undergraduate courses is three hours of work per week per credit hour for the average student who is appropriately prepared; much more time may be required to achieve excellence. These three hours may include one hour of lecture plus two hours of work outside class, three hours in a laboratory with little outside work, or any other combination appropriate to a particular course.

Maximum Hours per Semester/Term

An undergraduate student in good standing may register for as many as 18 credit hours in

any one semester (9 per term) by following the regular registration procedure. The college advisement center may authorize a student who has demonstrated superior academic ability to register for a maximum of 21 hours per semester (11 per term). Auditing of classes or registering for classes through Continuing Education constitutes a part of your total registration. Exceptions to these rules may be granted through a petition process by the University Registrar, B-150 ASB.

Final Examinations

The university schedules reading and examination periods. An examination period occurs at the end of each semester and term. The examination period is preceded by reading days, which give time for conscientious review, study, and synthesis of the semester's work. The reading and the examination periods are firmly scheduled

parts of the semester; students must not make plans that interfere with these important academic activities. Students may not take final examinations early. If illness or other uncontrollable circumstances prevent a student from taking an examination at the scheduled time, that student is responsible to inform the class instructor as soon as possible. The instructor may give the grade *Incomplete*, depending on the circumstances. The incomplete cannot be given unless the student and instructor together prepare a contractual agreement. In cases where a student has conflicting examinations or more than three examinations in one day, individual arrangement for alternative test times may be made by the instructor.

Academic Standards

A student's academic standing in the university is determined by two measures of work. One measure is the grades that the student earns and the other is the progress that the student makes to complete the work for which they have registered. The following outline shows the conditions and expectations for each according to the student's academic standing:

Academic Status	Under These Conditions	Expectations
Satisfactory Academic Standing	When the most recent semester/term and cumulative BYU grade point average (GPA) are 2.0 or above. AND When more than 65 percent of the grades in the last 30 credit hours attempted are progress grades: D- to A range. (Nonprogress grades are W, E, UW, WE, I, and IE. W is a nonprogress grade if a student withdraws after the deadline for adding classes.) Progress is evaluated only if a student has more than 10 hours of BYU credits. If a student retakes a class in which he or she received a passing grade (D- or above), the original grade is counted as a nonprogress grade.	Maintain the cumulative 2.0 GPA to graduate from BYU. Maintain more than 65 percent progress to continue in acceptable standing.
Academic Warning	When the most recent semester/term GPA is below 2.0. OR If a beginning freshman is completing the first college enrollment and earns a GPA below 2.0. OR When a student's progress is 65 percent or less.	Contact the Academic Support Office, department advisor, or college advisement center.
Academic Probation	a. When the cumulative BYU GPA falls below 2.0. OR b. While on academic warning and the semester/term GPA is below 2.0. OR c. While on academic warning a student received additional nonprogress grades during an enrollment, and progress has not risen above 65 percent. However, if while on warning the student completes the next semester/term with no nonprogress grades, the student will not be placed on probation even if the progress work remains at or below 65 percent of the last 30 hours of BYU credit.	1. Contact the Academic Support Office immediately. 2. If a student is receiving university or federal financial aid, check with the Financial Aid Office to evaluate eligibility. (Students on academic probation normally are not eligible for financial aid.)

Academic Suspension	While on academic probation a student fails to bring the cumulative BYU GPA to 2.0 or above or fails to receive at least a 2.0 GPA for the semester/term. (Academic probation will continue if the semester/term GPA is at least a 2.5 even if the cumulative BYU GPA continues to be below 2.0.)	1. Suspended students are denied continued enrollment. If a student is suspended and desires to return to BYU, he or she must qualify for readmission. To make a written appeal a student must contact the Academic Support Office before the end of the next enrollment period following suspension. After that time the student will be referred directly to the Admissions Office.
	OR	
	While on academic probation a student receives additional nonprogress grades and fails to raise progress above 65 percent during the current semester/term.	2. Suspension will be noted on the transcript. 3. If a student has preregistered and paid any fees for a subsequent semester/term, he or she must withdraw (discontinue) and arrange for a tuition refund.
Academic Dismissal	After careful review of a student's complete academic history by the Academic Standards Committee, the university may determine that the student has exhausted the opportunity to study and progress academically at BYU.	Academic dismissal is noted on the transcript, and the student will need to seek other options to continue any formal education. (Students who have been suspended for a second time are usually placed on academic dismissal.)

Procedures Related to Academic Standing

- | | | |
|---|---|--|
| <p>I. Discontinuance and tuition refund:
Students who preregister and pay tuition for a subsequent semester before learning they have been suspended from the university are responsible to withdraw (discontinue) and arrange for a tuition refund.</p> | <p>II. Determining academic standing:
Academic standing is determined by the Admissions Committee for new or returning students and by the Academic Standards Committee through the Academic Support Office for continuing students.</p> | <p>III. Contract: The Academic Standards Committee often establishes by contract individual conditions for continued enrollment (specific classes, grade requirements, major change, etc.) for students in any unsatisfactory grade or progress category.</p> |
|---|---|--|

Grading and Records

Grading

Grade point averages are computed by assigning numeric values to the letter grades:

Letter Grade Values

A	4.0	C	2.0
A-	3.7	C-	1.7
B+	3.4	D+	1.4
B	3.0	D	1.0
B-	2.7	D-	0.7
C+	2.4	E, UW, I, IE, WE	0.0

The grade given in a course is the teacher's evaluation of the student's performance, achievement, and understanding in that subject as covered in the class. The following adjectives indicate the meaning of the letter grades:

A	Excellent
B	Good
C	Satisfactory
D	Minimum passing
E	Unacceptable

Hence, the grade **A** means that the student's performance, achievement, and understanding were excellent in the portion of the subject covered in the class.

There are prerequisites that qualify students to be admitted to the more advanced classes offered by a department. A senior has added experience, understanding, and preparation and, consequently, progresses in courses that would have been impossible when the student was a freshman. The level of performance, achievement, and understanding required to qualify for each grade that carries credit (any grade other than E, UW, I, IE, or WE) is higher in a more advanced class than in those classes that precede it, and the student is prepared to work at this higher level.

If a student withdraws officially from a class during the first ten class days of a semester or the first six class days of a term, the permanent record will not show a registration for that class.

If the student properly withdraws from a class between the eleventh and twenty-fifth class days of a semester or between the seventh and thirteenth class days of a term, the record will be marked **W**.

AWE grade will be given if a student petitions to withdraw from a class after the deadline and he or she is failing the class at that time.

If the student stops attending a class at any time during the semester without completing the official withdrawing process, or the instructor fails to mark a grade for the student on the grade roll, he or she will receive a grade of **UW** (Unofficial Withdrawal). A **UW** affects the grade point average the same as an **E** does.

A grade of **P** indicates a passing grade. It has no effect on the GPA.

The letter grade **I** (Incomplete) is given on a contractual basis with the instructor for students who are eligible to complete the work in a prescribed time period. An incomplete is only given when extenuating circumstances (serious illness, death in the immediate family, etc.) occur after the twelfth week of a semester or the sixth week of a term. If the extenuating circumstances arise before the *twelfth week* of a semester or the *sixth week* of a term, the student should petition through the Registration Office to withdraw officially from the class(es). The Incomplete Grade Contract must be completed and signed by the instructor and the fee paid before submission of the Official Grade Roll at the end of the semester. A copy of the Incomplete Grade Contract must accompany the grade roll, or the grade will be changed to an **E**.

An incomplete is never given when one is failing or has failed the course. The instructor should indicate a specific length of time in which the student must complete the incomplete, not to exceed one year. Class attendance in a subsequent semester or reregistration is not permitted to make up the incomplete. In some special instances, such as a lab class, attendance may be required for the portion of the class or lab section missed. Once the work has been completed, the instructor should complete the portion of the Incomplete Grade Contract, showing the grade earned, and submit the form to the Records Office, B-150 ASB.

An incomplete is computed in the grade point average as a failing grade until the course work has been completed and the official grade has been submitted by the instructor.

The grade of **IE** indicates that the time period for completing the incomplete grade

has expired. The **IE** grade is computed as a failing grade.

A grade of **T** indicates course work in progress and is only used in certain approved courses in which work may extend beyond the semester. The **T** grade may be changed to A, B, C, D, E, or P, depending on the grade rule for the course, when the work is completed.

NS is placed on the permanent record when a grade roll has not been submitted by the instructor, and one year is granted to effect a change. During that time, or until corrected, the **NS** will not be considered in computing the grade point average.

Once recorded in the Records Office, no final grade may be changed except to correct the permanent record when calculation error has been made. When such corrections need to be made, an official Grade Change Authorization Form must be completed and sent to the Records Office.

Numeric Grade Values

In fall semester 1987 the Law School was granted permission to grade their courses on the numeric grading system:

80-90	Superior
75-79	Excellent
71-74	High pass
66-70	Pass
59-65	Low pass
50-58	Fail

Resolving Academic Grievances

Despite the well-meaning efforts of students and faculty alike, there may be times when students feel that they have been treated unjustly or that their work has been evaluated unfairly or inadequately by an instructor. Such occasions can be even more frustrating if students are unsure of the procedure for presenting their grievance. The following guidelines should help successfully resolve the problem.

1. Ideally, the student should first bring the grievance to the attention of the instructor involved, who is better acquainted with the situation than any other member of the faculty. Most instructors are anxious to work through differences with their students in a sensitive and fair-minded manner.

If (a) the instructor is not available, (b) the student feels strongly that the instructor will not deal with the grievance fairly, or (c) bringing the grievance to the attention of the instructor does not resolve the problem to the student's satisfaction, the student may appeal to the chair of the instructor's academic department.

The chair will consider the grievance and within 30 days will notify the student, the instructor, and the college dean of the decision. The decision can include a recommended grade change.

2. If the student is dissatisfied with the department chair's decision, the student may appeal *in writing* to the dean of the college within which the department is housed no later than 30 days after the date of the chair's notification letter. The written appeal should include the details of the grievance and an outline of the student's efforts to resolve it prior to making this appeal to the college dean.
3. The college dean will give the student the choice of having the grievance resolved directly by the dean or by a three-member committee chaired by a full-time member of the faculty selected by the dean. Should the student choose to have the grievance appeal heard by the three-person committee, the other two committee members will be appointed by the student and the instructor, respectively. Each must either be a full-time student or a full-time faculty member.
4. When the grievance is heard by the dean or the committee, both the student and the instructor may call witnesses to be questioned by the other party and by the dean or committee members. The number of witnesses and the conduct of the hearing will be determined by the dean or the committee chair.
5. The dean or committee's decision (its majority vote) will be final and not subject to appeal. The decision can include a grade change. The student will be notified in writing of the decision within thirty days of the hearing date.
6. Please realize that the same appeal process is available to the instructor. In other words, if the instructor is not satisfied with the department chair's decision, he or she may appeal to the college dean.
7. The student must bring the grievance to the attention of the instructor or the department chair within one calendar year from the last day of the examination period in the semester or term in which the problem originated. For example, if the grievance occurred in the course offered winter semester, the student must initiate the grievance procedure before the final day of the following year's winter semester examination period. Where military service or an LDS mission makes it difficult to bring the problem to the attention of the instructor or

department chair, a later consideration may be permitted.

Questions regarding these guidelines should be directed to the Office of the Dean of Student Life, 380 SWKT, Brigham Young University, Provo, UT 84602 (801-378-4668).

Scholastic Recognition Each Semester

The dean of each academic college at the close of each semester will post a list of names of undergraduate students who are ranked in the top 5 percent of their college for the given semester, who have earned a minimum of 14 credit hours, and who have earned a minimum grade point average of 3.5 or higher in all classes.

Grade Reports

Grade reports are available at no charge for all day and evening school students after the semester has concluded. Grade reports will be mailed to students who leave self-addressed, stamped envelopes containing their social security number at the Records Office.

Records

Records Office (B-150 ASB, 378-2631)

The Records Office is the official guardian of all permanent records of all academic work done at the university. The office is also responsible for issuing official transcripts of credit. Official transcripts include only courses completed through BYU.

Classification of Students

At the beginning of each semester, students are classified for that semester as follows:

<i>Credit Hours Earned</i>	<i>Classification</i>
1–31.9	Freshman
32–63.9	Sophomore
64–95.9	Junior
96 and over	Senior

Confidentiality of Records Policy

The university's policy concerning the confidentiality of student education records reflects a reasonable balance between the obligation of the institution for the instruction and welfare of its students and its responsibility to society.

The Family Educational Rights and Privacy Act of 1974 (FERPA) controls access to student education records. Brigham Young University will make a reasonable effort to extend to eligible students and their parents the rights granted by the act. On presentation of appropriate identification and under

circumstances that prevent alteration or mutilation of records, a student will be able to inspect all education records not considered by the university to be held under a pledge of confidentiality or considered to be private records of university personnel. Those with legitimate access to the records will be charged a reasonable fee for copies.

A student is entitled to an explanation of any recorded data and may initiate action pursuant to university policy through the Exception to University Policy Committee, if necessary, to correct or expunge information he or she considers inaccurate or misleading. (See Exception to University Policy section of this catalog.)

Faculty and administrative officers who have a legitimate need to use a student's education records will be allowed access to such records as needed without prior permission from the student. A request from an educational institution to which a student has applied for admission or from a lending institution from which a student is seeking financial aid will be granted without a student's permission. In addition, statistical data may be furnished to university accrediting bodies and governmental officials without a student's permission.

No personally identifiable information contained in a student's educational records, other than directory information, will be given to any third party, except as authorized by the act, without the student's written consent, and then only those records that are accessible to the student. The term *third party* is construed to include parents, spouse, employers, government agencies, or any other people or organizations. Parents or guardians may have access to grade reports and other reports of a student's activity if they establish to the satisfaction of the university that the student is dependent, for income tax purposes, on the parents or guardians for their support.

Court orders and subpoenas for records will be referred to the university's legal counsel and acted on according to the counsel's directions. The university will make a reasonable attempt to notify the student when nondirectory information is released in response to subpoenas or court orders.

Any eligible student or parent who believes that BYU has violated FERPA may file a complaint with the Family Policy and Regulations Office, U.S. Department of Education, Washington, D.C., 20202.

Directory information, i.e., information contained in the educational record of a student that would not generally be considered harmful or an invasion of privacy if disclosed, will be released to news media and to others on request. Directory information includes, but is not limited to, the following:

1. Student's name
2. Home and local addresses and telephone numbers
3. Date and place of birth
4. Major field of study
5. Information relative to participation in officially recognized activities—e.g., sports—including weight and height
6. Dates of attendance (current and past)
7. Current class schedule
8. Degrees and awards received
9. Previous educational institutions attended
10. Names of parents or spouse.

Students have the right, however, to refuse to permit the designation or disclosure of the above directory information. In that case, this information will not be disclosed except with the consent of the student or as otherwise allowed by FERPA. Any student who does not wish to have the designated directory information disclosed must file a written notification of his or her objection with the Registrar's Office (B-150 ASB) on or before the tenth day of a semester or the sixth day of a term. Forms for this purpose will be made available at that office upon request.

For information concerning the types and location of records subject to university policy on student record confidentiality, contact the Registrar's Office, B-150 ASB.

For a complete statement of the university's Confidentiality of Records Policy, contact the Office of Policies and Procedures (B-345 ASB).

Transcript Record Holds

A hold will be placed on a student's record for failure to meet university obligations (fees outstanding, university standards violations, etc.). No copy of the academic record or information about it will be released until the obligation is fulfilled.

Special Notations on Transcript

Grade suspension and academic dismissal appear on a student's transcript when action has been taken by the Academic Support Office (see Academic Support section of this catalog). University suspension or university dismissal may appear on a transcript as determined by the Honor Code Office. Generally these notices do not place a hold on a student's record but do give notice to

another university of action taken against the student.

Credits

Students earn approved university credit in the following ways:

1. Complete work in regular courses offered at BYU.
2. Complete college-level courses through Independent Study, Evening Classes, or other Continuing Education programs.
3. Transfer credit for college-level courses completed at an accredited college or university and transferred to Brigham Young University. (See the Admissions section of this catalog for further explanation on transfer college credit.)
4. Pass a separate examination in undergraduate courses offered by the university. (See the BYU Graduate Studies Catalog for information on how to challenge graduate courses.) The courses offered in religious education, cooperative education, and physical education activity classes may not be challenged. The department reserves the right to determine whether or not a course may be challenged.

Arrangements for challenging a course are made through the chair of the department offering the course. A \$20 nonrefundable fee is charged before each separate examination.

- Students who successfully pass the examination must submit the form to the Records Office (B-150 ASB) within *one* year of the examination. Only students who are currently enrolled or have completed at least one course at BYU other than Independent Study courses are eligible for the credit purchase option. Students who are suspended from the university are not eligible for the credit purchase option.
5. Complete the Advanced Placement (AP) examinations. Students who score a composite grade of 5, 4, or 3 in any subject may receive up to 8 semester hours of college credit in that subject.
 6. Complete the College Level Examination Program (CLEP). BYU will grant 3 semester hours of credit in each general exam in which a student scores 610 or higher. The university will also grant credit equivalent to the course that is taught at BYU for most of the CLEP

subject examinations. For additional information, contact the Admissions Office, A-183 ASB.

7. Serve in the armed forces. Students who have been on active duty in the service for more than one year can receive 1 semester hour of physical activity, 0.5 semester hour of physical fitness, and 4 semester hours in military science. Additional credit may be granted for college-level training and experience in the service. To receive credit, bring the military service DD-214 form to the Academic Advisement Office, B-268 ASB.

Earning BYU Credit While on Suspension:

Students who have been suspended from Brigham Young University are not eligible to enroll in courses through day school, evening school, or any of the Continuing Education programs offered by the university except those courses offered through Independent Study. Students should consult their advisement center to determine which Independent Study courses to take.

Repeating Classes

To have a previously completed course marked *repeated*, the new course must be equal or greater in credit hours.

When a class has been repeated, the credit used in computing the grade point average is the grade and credit hours earned the last time the repeated class was taken.

Students may repeat classes in the following ways:

1. Repeat Brigham Young University courses at Brigham Young University (except for R-suffix courses—see Abbreviations and Symbols in the Using This Catalog section).
2. Repeat at Brigham Young University courses initially taken at another university. (A statement of equivalency must be supplied by the appropriate BYU department chair.)
3. Repeat at another institution courses taken there and have the credit transferred to Brigham Young University.

Note: A course repeated at an institution other than the one at which it was taken originally and other than at BYU will not be counted as a repeat.

Discontinuance and Exception to University Policy

Discontinuance

Discontinuance Office (B-150 ASB, 378-7705)

To withdraw from the university, day students who have registered for classes must officially discontinue. Before the first day of class students may use the Touch-tone telephone discontinuance feature (see current class schedule for instructions). After classes begin students must discontinue through the Discontinuance Office.

Students who have registered for classes and paid tuition must officially discontinue to drop classes and initiate a tuition refund. (Refer to the Tuition and Fees section of this catalog for refund information.) Students who have registered for classes but *have not* paid tuition must also discontinue. If these students do not withdraw before the start of classes, they will be billed for tuition up to the official date of discontinuance.

The discontinuance process includes the following:

1. Before classes begin students may use the Touch-tone discontinuance feature (see current class schedule).
2. After classes begin consult with the Discontinuance Office representative and

complete discontinuance forms available from the Discontinuance Office.

3. If discontinuing during or after the sixth week of the semester (or third week of the term or block), obtain signatures of individual class instructors (student is now responsible for grades earned in class). The instructor will indicate an official withdrawal (W) or an academically failing (WE) withdrawal grade.
4. Submit discontinuance forms and be signed out by a Discontinuance Office representative.
5. Have the student activity card voided. *Retain the voided card and photo ID if future enrollment is anticipated.*

All undergraduate students who discontinue but later desire to reenter the university must then apply for readmission. To withdraw after the twelfth week of the semester (or fifth week of a block or term), students must file a petition with the Registration/Records petition secretary at B-150 ASB, rather than contacting the Discontinuance Office.

Those students registered as *Evening Classes* students only must discontinue through the *Office of Evening Classes, 120 HCEB*. Law School students must initiate their

discontinuance through the office of the Law School dean, 348-A JRCB.

Students who leave the university under emergency conditions and subsequently do not return still have the responsibility to discontinue before the discontinuance deadline. Official termination can be completed by contacting the Discontinuance Office at the earliest possible time.

Exception to University Policy

The Exception to University Policy Committee has been established for students who encounter situations that fall outside the realm of normal university procedure. If a student feels there is an error in his or her academic record, the student may petition to have a change made. The petition process must be initiated within *one* year from the semester or term in question. It is the student's responsibility to obtain the necessary supporting information from the instructor, physician, employer, etc., to accompany the request. Petition forms may be obtained in the Records Office, B-150 ASB.

Graduation

Graduation Evaluation Office (B-268 ASB,
378-3641)

Baccalaureate Degrees

Each department determines which type of bachelor's degree is appropriate to an area of study. Some departments are permitted to offer more than one, and candidates will receive the assigned degree. The university confers the following baccalaureate degrees:

Bachelor of Arts Degrees

American Studies
Anthropology
Art History
Asian Studies
Canadian Studies
Chinese
Classical Studies
Communications
Comparative Literature
Dance
Earth and Space Science Education
English
European Studies
Family History—Genealogy
Fashion Design
French
German
History
Humanities
International Relations
Italian
Japanese
Korean
Latin American Studies
Latin Teaching
Linguistics
Near Eastern Studies
Philosophy
Physics Teaching
Political Science
Portuguese
Public Policy
Russian
Spanish
Theatre Arts

Bachelor of Fine Arts

Music Dance Theatre

Bachelor of Science Degrees

Accounting
Agronomy
Animal Science
Applied Physics

Audiology
Biochemistry
Biology Composite Teaching
Botany
Cartography
Chemical Engineering
Civil Engineering
Clinical Laboratory Science
Clothing and Textiles
Conservation Biology
Construction Management
Dietetics
Early Childhood Education
Electrical Engineering
Electronics Engineering Technology
Elementary Education
Engineering Geology
Entomology
Family Sciences
Fashion Merchandising
Food Science
Geography
Geology
Health Sciences
Home Economics Education
Horticulture
Industrial Education
Management
Manufacturing Engineering
Manufacturing Engineering Technology
Mechanical Engineering
Microbiology
Molecular Biology
Nursing
Nutritional Science
Physical Education
Physical Plant Administration
Physical Science Composite Teaching
Physics
Planning and Resource Management
Psychology
Range Science
Recreation Management and Youth Leadership
Secondary Education
Social Science Composite Teaching
Social Work
Sociology
Special Education
Speech-Language Pathology
Statistics
Statistics—Quality and Productivity
Technology Arts Teacher Education
Travel and Tourism
Wildlife and Range Resources
Zoology

Bachelor of Arts or Bachelor of Science Degrees

Chemistry
Clothing and Textiles
Computer Science
Economics
Mathematics

Bachelor of Arts or Bachelor of Fine Arts Degrees

Art
Art Education
Art Studio
Design
Film

Bachelor of Arts or Bachelor of Music

Music

Bachelor of Independent Studies Degree

Independent Studies

Graduate Degrees.

See BYU Graduate Studies Catalog.

Graduation Information

Adherence to University Standards

Graduation may be delayed or denied for students who violate the BYU Honor Code or whose ecclesiastical endorsement has been withdrawn.

Application for Graduation

All who wish to graduate must officially apply for graduation. Students who are applying for the bachelor's degree should do so during their junior year. Those applying for the associate degree should do so at the beginning of their sophomore year. Application forms are available at the college advisement centers. Submit the completed application form and the graduation fee of \$15 for a bachelor's degree to the Cashiers' Office, D-155 ASB, no later than September 24, 1993, for December graduation; January 21, 1994, for April graduation; and May 20, 1994, for August graduation.

Students who apply after the deadline dates will automatically be considered for the next graduation. The Graduation Evaluation Office, B-268 ASB, will notify students in writing of the General Education and university requirements remaining. The

application fee is a one-time fee. Should a student not graduate on the date shown on the application, the evaluation will be held for future graduation.

Attendance at Commencement

All candidates for graduation are encouraged to attend the commencement and convocation exercises. Diplomas will be mailed to students after all grades are submitted and all graduation requirements are certified complete. Commencement exercises are held in April and August.

Deadlines for Transfer, Correspondence, and Incomplete Credit

All incomplete grades must be removed from the student's record, special examinations and convocation exercises must be passed and recorded, and all transfer and correspondence (Independent Study) credit must be on file in the Records Office at least four weeks before commencement.

Earning Lower Degree After Receiving Higher Degree

A person who has earned a higher degree is ineligible to earn a lesser degree at BYU unless exception has been granted by the Exception to University Policy Committee (B-150 ASB).

It is not permissible to receive both an associate degree and a bachelor's degree at the same commencement.

Independent Study Credit

A maximum of 36 semester hours of Independent Study credit may be applied toward the 128-semester-hour requirement for a baccalaureate degree. A maximum of 18 semester hours of Independent Study credit may be applied toward the associate degree.

Scholastic Recognition

University Honors will be awarded to any graduating senior who completes the following requirements:

1. Six or more GE courses designated as Honors courses that are in areas outside the major.
2. 3.5 GPA.
3. GE language requirement.
4. GE math requirement.
5. Honors thesis (a serious research project in one's major, usually undertaken the senior year).
6. Honors Undergraduate Required Reading List.

7. Application for Honors designation submitted by the established deadlines.

More detailed explanations of the University Honors Program are available in 350 MSRB and in the University Honors Education section of this catalog.

Latin Scholastic Distinctions at graduation are determined by GPA for the top 10 percent of the graduating seniors.

Summa Cum Laude is awarded on the basis of grade point average to the top 1.0 percent of the baccalaureate candidates who have earned a minimum 45 semester hours of credit at BYU.

Magna Cum Laude is awarded on the basis of grade point average to the top 1.1 to 5.0 percent of the baccalaureate candidates who have earned a minimum 45 semester hours of credit at BYU.

Cum Laude is awarded on the basis of grade point average to the top 5.1 to 10.0 percent of the baccalaureate candidates who have earned a minimum 45 semester hours of credit at BYU.

Graduation Requirements

Staying Abreast of Changes

University graduation requirements (General Education, religious education, and major) change with curriculum, program, and faculty changes. The university informs students of such modifications through its published curriculum materials (the university general catalog and the class schedules). Students who leave the university for an extended period of time should stay abreast of such changes through these documents.

Baccalaureate Degree Requirements

The baccalaureate degree at BYU is awarded for the equivalent of four years of dedicated university study. It marks not just achievement, but important changes in outlook that come as the result of an extended university experience. At BYU this includes not just the discipline of a major, but the foundation of religious education and the enlarged perspective of General Education. A student may have more than one major, but there is only one baccalaureate degree.

General Education Requirements for the Baccalaureate Degree

See General Education section of this catalog for complete information.

Languages of Learning	Number of Courses	Usual Credit Hours
First-Year Writing	1	3
Precollege Mathematics	1	0–2
Mathematics or Foreign Language	1–4	3–16
Advanced Writing	1	3
Arts and Sciences		
Core (Five courses)		
AHtg. 100		
or HonP. 240	1	3
Biol. 100		
or HonP. 260	1	3
PhyS. 100		
or HonP. 259	1	3
History of Civilization	2	6
(Complete one of sequences from GE list in current class schedule.)		
Electives (Four courses)		
Selected from approved GE courses in Arts and Letters, Natural Sciences, and Social and Behavioral Sciences		
(See GE course list in current class schedule.)	4	12
Total		36–50*

*Actual credit hours will depend on precollege preparation and course choices.

University Requirements for the Baccalaureate Degree

Classes	Hours
Exemption exam or health	1
Religious education	14
Physical fitness	.5
Physical activity (two classes)	1

Religious Education Requirements: Religion requirements are listed in the Religious Education section of this catalog.

Physical Fitness Requirement: PE 129 is required of all students, including the handicapped, and should be taken before the junior year whenever possible.

Physical Activity Requirement: The remaining credit of the physical education requirement can be met by any combination of two approved courses in dance and sports (one course for an associate degree). All 100-level physical education courses except 129 help satisfy the requirement, as do PE 200R, 201R, and Dance 275 (PE 233–248 fulfill the requirement for physical education majors only).

Adapted classes are provided for handicapped students. For more details, see the physical education course listings.

For information concerning physical education credit for Air Force and Army ROTC leadership labs, see the Aerospace

Studies and Military Science sections of this catalog.

Health Requirement: A knowledge of basic health principles is required of all students before graduation. This requirement may be satisfied in either of the following ways:

1. By passing a competency test that meets the level of understanding that should result from a good high school course in health and life-style management. The test will not be taken from any particular textbook but will test general understanding of basic principles of personal health.
2. By enrollment in and successful completion of one of the following health and life-style management courses:

Hlth. 129—An accelerated course designed for students who have had some previous formal instruction in health principles (1 credit hour).

Hlth. 130—A course designed to serve those students who have had limited prior health instruction and desire a more in-depth course (2 credit hours).

Upper-Division Requirement

A minimum of 40 semester hours of upper-division credit (classes numbered 300 to 599) is required for a bachelor's degree.

Transfer credit from junior colleges or other lower-division credit (freshman or sophomore level) from other colleges is not applicable for this graduation requirement.

A few lower-division courses at specified colleges have been accepted by major departments to substitute for upper-division BYU courses, but these will not be counted toward the upper-division requirement of 40 semester hours.

Residency Requirement

At least 30 semester hours of credit taken in residence at BYU are required for a bachelor's degree. A maximum of 10 semester hours earned at BYU Continuing Education centers or at Church institutes of religion may be applied toward this 30-hour requirement. Students must register and be on campus during two semesters—not necessarily consecutive—to satisfy the residency requirement.

Total Credit Hour Requirement

A candidate for a bachelor's degree must complete a minimum of 128 semester hours of earned credit.

D Grade Credit

No more than 18 semester hours of D grade credit may be applied toward baccalaureate degree requirements. Excess D grade credit will be deducted from total hours completed.

Grade Point Average Requirement

To graduate from BYU students must earn a minimum 2.0 BYU grade point average and a minimum 2.0 cumulative grade point average. Students must also meet minimum grade point average requirements in their major.

Major Requirements

Students must complete at least 20 semester hours in their major department, 10 of these on the BYU campus. Students must also satisfy any additional departmental requirements.

Double Major: A class used in a student's primary major cannot also be used in a second major or a minor without the prior written approval of both the department chairs and the dean(s) of the college(s) involved. Students should see their college advisement center for details.

Note: Any hold, warning, or probation by the Honor Code Office must have been properly cleared before graduation.

Policy on "Old" Graduation Requirements and Credit

Brigham Young University is committed to providing its students with an excellent university education consisting of a broad general education that includes religious education and a strong major education. Programs of the university change and develop in the continuing effort to make the students' learning and experience as valuable as possible. Development, growth, and improvement are expected parts both of our lives and our institutions. It is because of the commitment to a superb education that the university's programs develop and improve and that students are expected to meet the current standards of the university when they graduate, even though they may have begun their studies long ago under quite different expectations.

Students who complete a baccalaureate degree within eight academic years of enrollment at BYU qualify for graduation by meeting those religious, university, and general education requirements in effect when they initially enrolled, even though there may have been changes in general education and religious education requirements since that time.

In addition, students who complete baccalaureate degrees within eight academic years of enrollment at BYU qualify for graduation by meeting those major education requirements in effect when they officially declared the major with which they graduated even though such declaration was made at some point following their original enrollment. (A student officially declares a major one of two ways: [1] by indicating the choice of major on Part A of the university admission application or [2] by submitting a Change of Major Form to a college advisement center at a subsequent time.)

Students who have not graduated within eight years of their initial enrollment at BYU will be required to meet with the dean and department chair in the area in which they are majoring to determine graduation requirements and the use of credit previously earned. Where General Education or major requirements have changed or where credit previously earned was in an area of substantial change, students may be required to do additional work to meet graduation requirements.

This means that credit earned more than eight years before admission or readmission (including transfer credit) will be accepted to meet General Education or major graduation requirements at the discretion of the university.

Advisement: An important corollary of the university's commitment to provide its students with an excellent university education is its commitment to help students find their way through their programs effectively and efficiently. Students whose educational experience has reached over many years and who find that changes in programs will require additional work and preparation should consult with department advisors for help in planning their schedules in the best and most encouraging way possible.

The university's requirement that a student graduate under current or very recent standards is meant to benefit the student and is in no way established to deter a determined person from returning to the university after years away. Good advisement can be of great help in working out a program of study at the university, taking into account individual needs, concerns, and experience.

Students who return to the university after an extended absence should contact the Graduation Evaluation Office (B-268 ASB, 378-3641) and confer with their college advisement center counselors and department advisors immediately upon returning to the university, both for advice and help concerning graduation requirements and for evaluation of their credit. In many instances it will prove possible to negotiate a schedule of classes that will allow the student to move toward a degree without lost effort.

Religious Education

Dean: Robert L. Millet, Associate Professor, Ancient Scripture (370-A JSB)

Associate Dean: Donald Q. Cannon, Professor, Church History and Doctrine (370-B JSB)

Associate Dean: Larry E. Dahl, Professor, Church History and Doctrine (370-C JSB)

The following departments are in Religious Education:

Ancient Scripture
Church History and Doctrine

Religion courses are provided so that students may progress in their religious understanding and convictions simultaneously with their educational progress in secular fields. The Church of Jesus Christ of Latter-day Saints has always maintained that education is not complete without proper integration of secular and religious knowledge and values.

Religious Education administers all religion courses sponsored by the university. Courses are available in ancient and modern scripture, Church history and doctrine, and related subjects. Undergraduate majors are not offered in religion; however, some graduate offerings in the 500s and 600s are available for use as minors or supporting courses in some of the graduate degree programs of other departments at BYU.

Religion Requirements

All students at BYU should include regular gospel study as a continuous part of their university experience. Full-time undergraduate students should take one religion class each semester of enrollment until a minimum of 14 semester hours in religion has been earned toward a bachelor's degree or 8 hours toward an associate degree. In either program, 4 hours of credit in Book of Mormon must be completed by all students who will graduate from BYU. This should be done during the first year at BYU. Students may complete this requirement by taking ReLA. 121 and 122. *Returned missionaries should enroll in ReLA. 421 and 422.*

No more than 4 hours of religion credit per term, quarter, or semester, whether taken at BYU or elsewhere, may be counted toward the religion requirement.

Part-time students and students enrolled for a term or a block must complete 2 credit

hours of religion for every 16 hours of BYU registration.

Classes identified with numbers from 100 to 499 may be used to meet the religion requirement. Classes numbered in the 500s and 600s do not apply toward undergraduate religion credit.

Students Entering BYU Before Fall Semester 1985

Full-time undergraduate students should take one religion class each semester of enrollment until a minimum of 14 semester hours in religion has been earned toward a bachelor's degree or 8 hours toward an associate degree. In either program, 4 semester hours of the Book of Mormon must be completed.

Students Entering BYU Fall Semester 1985 and Afterward

In addition to Book of Mormon, all students enrolled after summer term 1985 must complete one New Testament class and one Doctrine and Covenants class. The New Testament requirement may be filled by taking any one of the following: ReLA. 111, 200, 211, 212, 310, 311. The Doctrine and Covenants requirement may be filled by taking ReLC. 324 or 325.

Transfer Students

Transfer students must fulfill the BYU graduation requirement in religion according to the following four guidelines. Requirements 1 through 3 can be completed at an LDS institute of religion or one of the other Church Educational System schools, as well as at BYU. Requirement 4 can be satisfied only at BYU.

1. All students must complete the entire Book of Mormon sequence.
2. Students transferring with fewer than 64 semester hours (96 quarter hours) of college credit must complete one course in the New Testament and one course in the Doctrine and Covenants.
3. Students transferring with 64 or more semester hours but fewer than 96 semester hours (144 quarter hours) must

complete one course in the Doctrine and Covenants.

4. All students must complete a minimum number of religion credits at BYU according to the following schedule, regardless of the number of religion hours completed elsewhere:

Total Transfer Credits	BYU Religion Hours Required
0-15.9	14.0
16-31.9	12.0
32-47.9	10.0
48-63.9	8.0
64-79.9	6.0
80-95.9	4.0
96 or more	2.0*

*All graduates of BYU must have a total of 4 semester hours of Book of Mormon credit.

Note: The transfer credits are shown in semester hours. To convert quarter hours to semester hours, multiply the quarter hours by two and divide by three (i.e., 12 quarter hours $\times 2 = 24 \div 3 = 8$ semester hours).

Courses for Ancient Scripture and Church History and Doctrine

See Religious Education in Academic Departments, Degrees, and Courses section of this catalog.

Students Studying Off Campus

BYU students who study off campus to fulfill degree requirements are required to register for a religion course during the semester. This can be fulfilled through Independent Study or at a BYU Continuing Education center.

Religion Credit from Non-LDS Colleges and Universities

Religion credit from non-LDS universities and colleges will not satisfy the religion requirement at BYU. The transfer credit will, however, apply as elective credit toward the total hours required for graduation.

Religion Credit Completed at Centers for Continuing Education

Students must complete 2 credit hours of religion for every 16 hours of registration at BYU Continuing Education centers.

Preparation for Church Educational System Employment

To be considered for a profession as a seminary teacher a student must obtain a bachelor's degree in a major of his or her choice and complete the seminary teacher training classes (RelC. 370, 471). Following a student teaching experience in a local seminary, the most effective teachers are recommended for full-time assignments. Complete information is available through

the Office of Seminaries and Institutes (207 JSB, 378-2031).

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Religious Studies Center

(270 JSB)

The dean of Religious Education is also the general director of the Religious Studies Center, which promotes research in such areas as Ancient Studies, Bible, Book of Mormon, Church History, Doctrine and Covenants, Pearl of Great Price, Special Projects, and World Religions.

The center is a supporting and coordinating agency for religion-oriented research throughout the university and the Church, concentrating on research, writing, and other scholarly activities.

The Richard L. Evans Chair of Religious Understanding

The Richard L. Evans Chair of Religious Understanding promotes understanding among people of different faiths. Its purpose is to articulate to a broad audience the religious values to which Elder Evans dedicated his life and to promote an enlightening exchange among Latter-day Saints, members of other faiths, and other people of good will.

General Education

Dean: Harold L. Miller Jr., Professor,
Psychology (302 MSRB)

Associate Dean: Elouise M. Bell, Professor,
English

Associate Dean: Thomas J. DeLong,
Professor, Secondary Education

Associate Dean: Juliana Boerio-Goates,
Associate Professor, Chemistry

Associate Dean: Stephen D. Ricks, Associate
Professor, Asian and Near Eastern
Languages

Why General Education?

General Education is central to the university's purposes, its definition, and its academic commitments. In an age of increasing specialization of knowledge, technological complexity, and unremitting change, General Education affords appreciation and understanding of humankind's most valuable achievements in the arts, letters, and sciences. It offers vantage points from which to sharpen our awareness of the development of our own culture and its relatedness to others. It informs us more richly of how we have come to think and believe and behave as we do.

General Education teaches us the importance of critical thinking, moral judgment, aesthetic sensibility, and historical context. These refinements, together with the cultivation of the languages of learning — mathematics, English, and foreign languages — enable us for a lifetime of learning, problem solving, and responsible, others-focused action. We gain in appreciation for the good, the true, the beautiful—and in the capacity to share these with others.

At BYU, General Education both underpins and complements religious and major education. The curriculum of General Education is designed to inform students of how we have come to the present state of knowledge and to enhance their awareness of the methodological and cognitive constraints on the pursuit of truth. In addition, given BYU's concern that the development of individuals be eternal, General Education means continued inquiry into the gospel of Jesus Christ and its implications for knowledge, society, and truth.

Who Must Complete General Education Requirements?

All students who enrolled fall semester 1988 or thereafter must complete the GE requirements outlined below. Information regarding GE requirements for those enrolled during the period from winter semester 1976 (winter semester 1977 for new transfer students) through summer term 1988 can be obtained from the college advisement centers, the Graduation Evaluation Office (B-268 ASB, 378-3641), or the dean of General and Honors Education (302 MSRB, 378-3038). Students who intend to complete the former requirements (those in effect from winter semester 1976 through summer term 1988) *must do so before the beginning of fall semester 1995.*

When Should General Education Requirements Be Completed?

Students are encouraged to complete the First-Year Writing and Precollege Mathematics requirements during their first year at the university. *Any student who challenges the First-Year Writing requirement by examination (see following section) must complete the challenge within a year of residence after entering BYU. No challenge will be allowed thereafter.*

Students are also encouraged to complete the American Heritage, Biological Science, and Physical Science requirements in their freshman year as well. The History of Civilization sequence generally should be taken during the sophomore year.

Any student who pursues the Mathematics option for the Languages of Learning requirement must complete Math. 110 before enrolling in a subsequent course in mathematics or statistics.

The Advanced Writing requirement should be completed during the junior year. Completion of the First-Year Writing requirement is prerequisite to enrollment in any course that fills the Advanced Writing requirement.

How Do You Complete the General Education Requirements?

GE requirements can be met in four ways:

1. Successfully completing approved GE courses, including Honors courses.
2. Passing special examinations at the university.
3. Transferring acceptable credit from other institutions.
4. Receiving credit from Advanced Placement (AP) examinations and the College Level Examination Program (CLEP).

These options are discussed in detail below.

General Education Courses

You are strongly encouraged to meet the GE requirements by enrolling in departmental or Honors courses at the university. As noted earlier, General Education is at the center of what Brigham Young University is about. As a consequence, the university devotes substantial resources and engages its best faculty in providing this educational opportunity for you.

Special Examinations for Graded Credit

Special examinations for basic General Education courses are offered on the dates listed in the General Education section of the current class schedule. The tests are scheduled early in the semester / term to allow students to drop unneeded classes before the official drop deadline. Students who intend to take the special examinations should consult the General Education section of the current class schedule, the Testing Center (265 HGB), the college advisement centers, or the dean of General and Honors Education for the examination schedule and additional instructions. For information on special examinations for First-Year Writing, students should consult the English Composition Office (3110 KHB).

Special examinations for graded credit are referred to as "challenge examinations" and must be arranged through the Testing Center or the department offering the examination.

There is a fee to take each examination. In addition to this fee, students must purchase academic credit in order to have the letter grade posted to the transcript of grades.

The procedures for challenging General Education courses are as follows:

I. For Examinations Given at the Testing Center—

- A. Whether or not you are enrolled in the course that you are challenging:
 1. Go to the Testing Center on one of the scheduled examination dates.
 2. Pay the required fee at the Testing Center.
 3. On successful completion of the examination, obtain a Class Credit Request Form from the Testing Center (265 HGB) and have it validated there. Students who pass the First-Year Writing examination must obtain the Class Credit Request Form from the English Composition Office (3110 JKHB) and have it signed by the coordinator of composition.
 4. Present the completed form to the Records Office (B-150 ASB). The form must be submitted to the Records Office *during* the semester/term in which the examination is passed.
- B. *If enrolled in the course, you must also complete a Change of Registration Form and drop the course. If the challenged course is not officially dropped before the university's deadline, the grade given by the instructor based on class performance will appear on the grade transcript.*

II. For Examinations Not Given in the Testing Center—

- A. Whether or not you are enrolled in the course that you are challenging:
 1. Contact the department that offers the course during the first two weeks of the semester/term.
 2. Complete the Special Examination Form available from the department.
 3. Arrange to take the examination.
 4. Pay the required \$20 fee at the Cashiers' Office (D-155 ASB) and have the form validated there.
 5. Present the validated form to the departmental examiner.
 6. Have the grade and credit recorded on the form by the examiner and obtain the necessary signatures.
 7. Present the completed form to the Records Office (B-150 ASB). The form must be submitted within *one* year after completing the examination.
- B. *If enrolled in the course, you must also complete a Change of Registration Form and drop the course. If the challenged course is not officially dropped before the university's*

deadline, the grade given by the instructor based on class performance will appear on the grade transcript.

Exemption Examination: No Credit or Grade.

Exemption examinations (in contrast to challenge examinations) are given for three GE requirements: First-Year Writing, Precollege Mathematics, and Phys. 100. The examinations are given at the Testing Center on scheduled dates listed in the General Education section of the current class schedule. A fee is required to take each examination. A passing grade on an examination means that the student's Advisement by Computer (ABC) Form will reflect the completion of the GE requirement. However, no academic credit will be posted on the transcript of grades unless it is requested and the proper form submitted to the Records Office.

In addition to the examination administered by the Testing Center, students seeking exemption from First-Year Writing are required to submit samples of their writing to the English Composition Office (3110 JKHB).

Students who pass the exemption examination for First-Year Writing have the option of requesting academic credit and having the grade posted on their transcript of grades. To receive an exemption from Phys. 100, students must receive a grade of B- or better. However, students who receive grades of C- or above may satisfy the requirement by requesting the academic credit and having the grade posted to their transcripts. (See the preceding Special Examination for Graded Credit section for instructions regarding the procedure for requesting academic credit.)

Students who take the exemption examination for Math 97 (which meets the Precollege Mathematics requirement) do not have the option of requesting academic credit since the course carries none.

The Reading-Writing Center (1010 JKHB) is available to assist students who are preparing for the First-Year Writing exemption examination.

All first-semester/term students may take the exemption examinations for First-Year Writing and Precollege Mathematics one time only free of charge on the dates listed in the General Education section of the current class schedule. The regular examination fee will be charged for additional examinations and any that are taken after the first semester/term of residence.

Transfer Credit and Credit from Advanced Placement and the College Level Examination Program

Application of transfer credit to GE requirements will be determined on the basis of course-by-course equivalency by the Transfer Evaluation Office (B-268 ASB). Associate degrees from transfer institutions do not by themselves satisfy BYU's GE requirements. Students should consult

advisement personnel at the transfer institution or the BYU Transfer Evaluation Office (B-268 ASB, 378-3641) for further information.

Students who complete the Advanced Placement (AP) examinations offered by high schools and who achieve a composite score of 3 or higher will be granted up to 8 semester hours of credit in the subject. For students with AP credit posted to a transfer institution transcript, that credit will be evaluated based on BYU's standards for awarding AP credit. For information regarding specific credit contact the Admissions Office (A-183 ASB, 378-2507).

BYU will grant credit for the College Level Examination Program (CLEP) as well. Specifically, 3 hours of credit will be granted for each general examination on which a student scores 610 or higher. Students can contact the Admissions Office for more information. CLEP credit posted to a transfer institution transcript will be evaluated based on BYU's standards for awarding CLEP credit.

How Do You Get Help with Specific Questions Concerning General Education?

The essential information concerning General Education is found in this catalog. Sources of additional information include the following:

1. **Class Schedule.** The official list of approved GE courses is available in the current class schedule.
2. **College Advisement Centers.** The recommended source of information and advice about the General Education requirements is the college advisement center. These centers, together with the Open Major Advisement Center (151 SWKT), provide assistance with registration, graduation requirements, policies and procedures, fields of study, changes of major, and many other aspects of academic life. The address of each college advisement center appears in this catalog as part of each college listing, as well as in the current class schedule. Computer terminals are available in the advisement centers to provide you an up-to-date report of your academic status. In addition, Advisement by Computer (ABC) Forms are sent to you early each semester. These list the GE courses you have completed and also the GE requirements that remain to be completed.
3. **Dean of General and Honors Education.** The dean's office is located in 302 MSRB and functions in an ombudsman's role for students who have experienced difficulties with records, fees, or any other GE matter that the college advisement centers refer to the dean.

Religious Education Requirement

See Religious Education section of this catalog.

Other University Requirements

See Graduation section of this catalog.

What Are the General Education Requirements?

The General Education requirements are not the same as the Religious Education and other requirements for graduation. Those requirements are outlined in the Religious Education and University Requirements sections of this catalog.

Students who entered the university before fall 1988 and transfer students who entered the university before fall 1991 should consult with their college advisement centers or with the dean of General and Honors Education regarding the General Education requirements that apply to them. For all other students, the requirements are as follows:

General Education Requirements for the Bachelor's Degree

1. Languages of Learning	Number of Courses	Usual Credit Hours
First-Year Writing Precollege	1	3
Mathematics	1	0–2
Mathematics or Foreign Language	1–4	3–16
Advanced Writing	1	3

Note: Specific courses that meet these requirements are listed in the General Education section of the current class schedule.

Requirement in Mathematics or Foreign Language

To fill this requirement, students may choose either the Mathematics or the Foreign Language option. The requirement may be filled by courses within the student's major. Certain majors require students to fill all of one option and all or part of the other as well. Students intending to graduate with University Honors are required to fill *both* options.

The Mathematics option requires one or more semesters of college-level mathematics *beyond* college algebra (Math. 110) or quantificational logic (Phil. 205). Approved courses are listed in the General Education section of the current class schedule.

A student who chooses to fill the Foreign Language requirement builds on high school,

college, or other prior study of foreign language, through which a certain level of competence in the language has been attained. Further study adds to that competence and allows the student to use the language meaningfully to access another major historical, cultural, intellectual, literary, and artistic heritage.

Students fill the requirement by completing an approved culminating course in the language that is chosen. A student with no previous knowledge of the language would take the culminating course after taking three semesters of instruction in the language. Students with prior knowledge of the language might be ready for the culminating course with only one or two semesters of instruction, or with none. Conversation and grammar courses will not substitute for the culminating course. Approved courses are listed in the General Education section of the current class schedule.

2. Arts and Sciences Core

American Heritage	1	3
Biological Science	1	3
Physical Science	1	3
History of Civilization	2	6

Students must complete one of the History of Civilization sequences listed in the General Education section of the current class schedule. The courses are designed to be taken in sequence, with the second course building on foundations laid in the first. Attempting to take such courses out of sequence may place a student at a serious disadvantage. If the discontinuation of a certain sequence during a student's extended absence from the university makes a change in the second course unavoidable, the student should consult with the dean of General and Honors Education for assistance in identifying an appropriate alternative.

3. Arts and Sciences Electives

Selected from approved GE courses in Arts and Letters, Natural Sciences, and Social and Behavioral Sciences listed in the General Education section of the current class schedule. 4 12

The following restrictions apply to the electives:

1. No more than one course taken in the broad area of the student's major will meet the electives requirement. That is, majors in the College of Fine Arts and Communications and the College of Humanities may take only one elective in Arts and Letters. Majors in the College of Biology and Agriculture, the College of Engineering and Technology, the College of Nursing, and the College of Physical and Mathematical Sciences may take only one elective in Natural Sciences. Majors in the College of Family, Home, and Social Sciences may take only one elective in

Social and Behavioral Sciences. Majors in the College of Business, the College of Education, and the College of Physical Education must distribute the four electives over all three of the categories.

Students may choose not to take any elective course in the broad area of the major but to fill the elective requirement by completing two approved courses in each of the two categories outside it.

A minimum of one elective in each of the categories outside the broad area of the major is required. For example, a major in the College of Family, Home, and Social Sciences must take at least one Arts and Letters elective and one Natural Science elective to fill the General Education requirements.

2. Students who elect to complete *both* the Mathematics and the Foreign Language options are excused from *one* of the four Arts and Sciences elective requirements. However, they are subject to restriction 1 above and should complete the electives requirements by selecting courses in each of the remaining categories outside the broad area of the major.

What Classes Meet the General Education Requirements?

Courses that satisfy the GE requirements are listed in the current class schedule. Lists are also available at the college advisement centers and from the dean of General and Honors Education. Courses will meet GE requirements only in those semesters/terms in which they are listed in the General Education section of the class schedule. Unless a course appears in the current list, it will *not* meet GE requirements.

How Should You Choose General Education Classes?

An undergraduate degree signifies that the recipient has completed at least two types of study: concentrated work in a single discipline (the major) and a more general education in the subject matters and methods of the commonly accepted categories of knowledge. The second, broader study is intended to complement the study in the major.

It is wise to meet the GE requirements by selecting courses that your major will not lead you to confront. Choose your GE courses as if each were your only opportunity to learn about subjects that you might want to know more about once you have left the university. Your GE courses should give you the necessary background to learn more about a subject on your own.

Innovative General Education Courses

Frequently some General Education courses are offered that differ in substantive ways from the regular GE course offerings. For example, they may be taught in the residence halls, they may be colloquia with more than one instructor, they may employ unconventional pedagogy, or they may be experimental in other ways. The number and

nature of these courses will vary from semester to semester. Refer to the General Education section of the current class schedule for listings with descriptions.

Is There an Honors Version of General Education?

Yes. An enriched General Education curriculum designed to challenge the highly capable and motivated student is available.

Further information about Honors Education is provided in the University Honors Education section of this catalog and is also available from the dean of General and Honors Education, 302 MSRB, 378-3038.

University Honors Education

Dean: Harold L. Miller, Jr., Professor,
Psychology (302 MSRB)

Associate Dean: Elouise M. Bell, Professor,
English

Associate Dean: Thomas J. DeLong,
Professor, Secondary Education

Associate Dean: Juliana Boerio-Goates,
Associate Professor, Chemistry

Associate Dean: Stephen D. Ricks, Associate
Professor, Asian and Near Eastern
Languages

University Honors at Graduation

"University Honors" is a distinction awarded to all graduates of BYU who have met the Honors requirements in General Education as described below. This prestigious designation is recorded on the university diploma, on the official transcript of grades, and in the graduation program. All Honors classes taken and the Honors thesis title also appear on the transcript.

University Honors with Honors in a Major

Certain departments have established Honors majors that build on the foundation of the Honors requirements in General Education. Students majoring in these departments who meet the requirements for graduation with University Honors have the additional option of meeting the requirements of the Honors major and graduating with "Honors in [a certain major]." Thus, a student may graduate with "University Honors and Honors in Chemistry," for example. (Note, however, that it is not possible to graduate with Honors in chemistry unless one also satisfies the requirement for graduation with University Honors as well.) For the name of the Honors advisor in a certain department, consult the University Honors Program Course Guide or contact the departmental office. Honors majors can be had in art history, chemistry, communications, comparative literature, economics, English, French, geology, German, history, humanities, Italian, mathematics, mechanical engineering, microbiology, molecular biology, music,

philosophy, physics, Portuguese, Russian, Spanish, statistics, studio art, and zoology.

Participation in Honors

Honors Education provides an unusually rich and challenging experience for capable and motivated students. Honors Education is not merely a more intensive General Education or a more strenuous program in a major. Rather, it attempts to link the broad university perspective with the specific concentration associated with a major. Students who pursue Honors Education at Brigham Young University will be offered the challenge of Honors courses that form a part of their General Education, as well as an intensive experience in their major.

To graduate from BYU students must meet not only the requirements of a major department but also the requirements of General Education, religion, and physical education. Most students complete the nonmajor requirements through courses in the general university curriculum. Capable and motivated students are invited to satisfy General Education and Religious Education requirements through Honors. Although it is hoped that students will choose to complete all of the requirements for the University Honors designation, those who do not intend to do so are still invited to participate in the Honors curriculum to whatever extent they choose.

Honors Education is open to all capable and motivated students and does not require formal application for membership. Indicators of "capable" include a composite ACT score of 28 or above, a high school GPA of 3.8 or above, or a university GPA of 3.5 or above. Defining "motivated" is more difficult. It would be a mistake to recommend Honors courses only to those students with high scores, either GPA or ACT, since it is difficult to gauge a student's ability from scores alone. Such scores may not say much about such important inner qualities as determination, discipline, and initiative or about recent achievements that may contrast with earlier performance. All students are invited to consider Honors as a way to achieve the kind of academic experiences they seek. Students may register for Honors courses at any time during their undergraduate years without necessarily

intending to complete all the Honors graduation requirements.

The Advantages of Honors

Faculty

The most important advantage of enrolling in Honors is the opportunity to participate in demanding, high-quality courses taught by some of the university's best professors. In addition, Honors provides a stimulating learning environment outside formal course settings.

Curriculum

Honors offers a curriculum core consisting of a two-semester sequence in the History of Civilization and an intensive writing course. Beyond this core, Honors colloquia, seminars, and departmental Honors courses provide a variety of experiences for Honors students in the historical development of ideas, cultures, arts, letters, and the sciences; these offerings are discussed more fully below.

Honors Colloquia. Each semester, Honors sponsors several Honors colloquia that bring together teams of the university's most respected professors from diverse disciplines to teach a variety of broadly based subjects. The colloquia are interdisciplinary in nature and taught by at least two and often three professors from different fields. These courses allow a unique flexibility in method and content and stress the complementary nature of various disciplines in dealing with our cultural heritage and modern problems. Recent colloquia include "Turning Points in the History of Civilization," "Use and Misuse of Human and Natural Resources," "Women's Lives," "The Daedalus Project," "The Great Ideas and Values of Mankind," "Shaping the Modern Mind," and "Environmental Biology."

The particular subjects and faculty differ across colloquia. Some provide an integrated approach. Others are intended primarily for students majoring in particular disciplines. All of the colloquia, however, are centered on intensive reading, discussion in large and small groups, and careful writing. Each

colloquium involves a group of approximately fifty students and two or three faculty and offers an educational experience unlike that in any other class offered at the university.

Honors Seminars. A number of Honors seminars are also offered each semester. They range across subjects as diverse as "The Appreciation of Jazz," "Vienna, City of Genius," "Qualitative Mathematics and Its Aesthetics," and "The African American Experience in America." The seminars are centered within a discipline, but they are intended to be accessible to students who are not majors in that discipline. Like the colloquia, the seminars require critical reading, thinking, writing, and discussion. But unlike the colloquia, the seminars are more specialized, are directed by a single professor, and are usually limited in enrollment to twenty students.

Departmental Honors Sections. Departments within the university offer courses taught by their strongest faculty and intended especially for Honors students. Departmental Honors sections of GE courses are usually smaller than regular courses and provide greater occasion for classroom discussion and additional reading and writing under the supervision of the professor. In addition, if the department offers an Honors major, some courses in that major may be structured specifically for the Honors student. These courses would go beyond the limits of the traditional major and would stress critical and analytical thinking and writing in the form appropriate to the subject of the major.

Honors Housing, the Honors Center, and Special Honors Activities

Students in Honors benefit most directly from their association with fellow Honors students and with Honors faculty. To encourage this interaction among students outside the classroom, special on-campus housing for Honors students (in Helaman Halls, Deseret Towers, and Heritage Halls) is available. In addition, Honors students also have a center in the Karl G. Maeser Memorial Building, which provides them with a quiet study hall and a commons room for informal meetings and discussion. An Honors computer room and an Honors writing laboratory are housed nearby in the Heber J. Grant Building.

Honors publishes the scholarly work of students in *Insight*, an intellectual journal with an all-student staff. A special series of concerts, dramatic productions, and exhibitions of art and photography are sponsored by Honors in the Maeser Building, and assistance with academic advisement is provided by Honors student aides.

The Honors Student Council sponsors social and educational events, publishes a

regular newsletter, and serves as an important advisory body to the Honors deans. The council is open to all interested students. Its meetings begin at 4:30 p.m. Tuesdays in 321 MSRB.

Graduation with University Honors

To graduate with University Honors, a student must accomplish the following:

1. **Honors course work.** Complete a course in intensive writing, the Honors two-semester sequence in the History of Civilization, and three or more Honors electives from General Education categories, two of which must be in areas outside one's major. (Religion courses do not count toward this requirement.)
2. **Advanced mathematics.** Achieve a proficiency in mathematics to the level of the General Education requirement (calculus, statistics, or quantificational logic).
3. **Foreign language.** Achieve a proficiency in any classical or modern language to the level of the General Education requirement (generally to the level of the fourth college semester).
4. **Masterworks of Art and Literature.** Complete an independent study of a number of important works of literature and the arts, *Masterworks of Art and Literature*, a reading, listening, and viewing guide published by the Honors Program, provides suggestions, but alternative works may also meet the requirement, subject to approval by the Honors deans. This list is available in 350 Maeser Building.
5. **Honors thesis.** Complete an Honors thesis, which provides an opportunity to work closely with a faculty member on a project of the student's choosing in her or his major. The thesis is an independent written work that must receive both departmental and Honors approval.
6. **Student portfolio.** Maintain a student portfolio, a representative collection of one's best academic work over the undergraduate years. The portfolio reflects a personal journey.
7. **Service experience.** Write a one-page summary of his or her most memorable service experience while a student at BYU (apart from a mission). This summary should indicate why the experience was personally significant and how it figures in plans for community service following the university years.
8. **Grade point average.** Have a cumulative 3.5 GPA at graduation.
9. **Honors graduation application.** Apply for graduation with University Honors at the Honors Program office.
10. **Exit interview.** Complete an exit interview with Honors deans and faculty thesis advisor(s). In addition to an

examination on the thesis and masterworks, the exit interview is a time to review the student's portfolio and service to the community.

Further details of the Honors curriculum and graduation requirements appear in the University Honors Program Course Guide, which is available each semester in 350 MSRB.

Masterworks of Art and Literature

As part of their undergraduate studies, Honors students are expected to complete an independent study of a number of the most important works of literature and the other arts. A reading, listening, and viewing guide provides suggestions, but alternative works may also meet the requirement, subject to approval by the Honors deans.

Many of the masterworks will likely be studied in connection with courses, but Honors also sponsors a series of "modules" each semester. Each module is devoted to discussion and analysis of a selected work from the list. The modules are led by professors who are authorities on the subject.

The modules may be audited. However, 1 credit hour may be earned by attending three months of modules and by registering for Honors 214R, section 1. (No General Education credit is awarded to this course.)

Honors Thesis

To graduate with University Honors, a student must complete an Honors thesis. This requirement provides an opportunity for a student to work closely with a faculty member on a project of the student's choosing in the student's major. The thesis is an independent written work that must receive both departmental and Honors approval.

Honors Student Portfolio

The portfolio represents primarily a collection of the student's best work throughout his or her tenure as an undergraduate student. However, the portfolio is not a scrapbook; it contains *samples* of the student's best writing, which may include class papers, exams, laboratory reports, musical compositions, paintings, designs of equipment, articles submitted for publication, etc. Depending on a student's major, the portfolio may contain other appropriate evidences of academic progress or achievement (e.g., artwork). When submitted for examination at the exit interview, the portfolio should contain, but is not limited to:

1. A one-page outline or summary, semester by semester, of the major highlights and achievements of the student's undergraduate experience.
2. A one-page evaluation or assessment of the student's most memorable service experience while a student at BYU (apart from a mission). Why or how was this experience formative for the student? How does the student plan to serve the larger community once he or she has left the university?
3. A current transcript.
4. A list of three faculty members who know the student and his or her work.
5. A representative collection of the student's best academic work that reflects his or her educational progression throughout the undergraduate years. In this collection, some correlation with item 1 is looked for.

Honors and Grades

Anyone may register for Honors classes, but the classes are taught at the level of the superior student. Statistics indicate that capable and diligent students do very well in Honors classes. In fact, on the average, they receive slightly higher grades in their Honors classes than in their other classes in any given semester. Honors courses are not graded on a curve. Because the classes are more demanding and fulfilling, most students are motivated to perform well.

Honors Courses

The University Honors Program Course Guide contains a complete list of Honors courses and detailed course descriptions. This is an essential supplement to the university class schedule and is available in 302 MSRB (378-3038).

I. Writing Skills

- 200. Intensive Writing.** (3:3:0)
Meets GE requirement in First-Year Writing.
- 300. Advanced Writing.** (3:3:0) Prerequisite: completion of First-Year Writing requirement.
Approaches to advanced writing that differ from departmental offerings. Meets GE Advanced Writing requirement.

II. Arts and Sciences Core

- 201. History of Civilization 1.** (3:3:0)
Colloquium or seminar in the history of civilization from antiquity to ca. A.D. 1500.

- 202. History of Civilization 2.** (3:3:0)
Prerequisite: HonP 201.
Colloquium or seminar in the history of civilization from ca. A.D. 1500 to the present. In conjunction with HonP 201, meets the GE core requirement in History of Civilization.

- 240. American Government and Society.** (3:3:0)
Meets AHtg. 100 GE core requirement.

- 259. Physical Science.** (1-6:6:0)
Meets the PhyS. 100 GE core requirement.

- 260. Biology.** (1-6:6:0)
Meets the Biol. 100 GE core requirement.

III. Honors Arts and Sciences Lower-Division Electives

Honors 203–220: Arts and Letters

- 203R. Literature.** (1-6:6:0 ea.)
Seminar in literature.
- 204R. Fine Arts.** (1-6:6:0 ea.)
Seminar in art, design, music, theatre, or cinema.

- 205R. Philosophy.** (1-6:6:0 ea.)
Seminar in philosophy or such related areas as religious and moral thought.

- 206R. Humanities.** (1-6:6:0 ea.)
Seminar in the humanities.

- 207R. Language.** (1-6:6:0 ea.)
Seminar in semantics, grammar, linguistics, or history of language.

- 210R. Civilization and Culture.** (1-6:6:0 ea.)
Seminar on the historical development of Western civilization and culture or non-Western civilizations and cultures.

- 211R. Colloquium in Arts and Letters.** (1-6:6:0 ea.)

- 214R. Readings in the History of Ideas.** (1-6:6:0 ea.)
Seminar in scientific, political, and philosophical thought based on texts treating the human legacy, society, science, ethical challenges, aesthetics, etc.

- 218R. Epistemology.** (1-6:6:0 ea.)
Epistemology for GE Arts and Letters credit.

Honors 221–240: Social and Behavioral Sciences

- 221R. Colloquium in the Social Sciences.** (1-6:6:0 ea.)

- 222R. History.** (1-6:6:0 ea.)
Seminar in history or such related areas as archaeology.

- 223R. Behavioral Science.** (1-6:6:0 ea.)
Seminar in psychology, psychiatry, organizational behavior, etc.

- 224R. Political Science.** (1-6:6:0 ea.)
Seminar in political science, international relations, jurisprudence, or political and economic geography.

- 225R. Sociology.** (1-6:6:0 ea.)
Seminar in sociology or family science.

- 226R. Anthropology.** (1-6:6:0 ea.)
Seminar in anthropology or related areas.

- 227R. Economics.** (1-6:6:0 ea.)
Seminar in economics or related areas.

- 228R. Education.** (1-6:6:0 ea.)
Seminar in education or related areas.

- 229R. Business.** (1-6:6:0 ea.)
Seminar in business or related areas.

- 230R. Civilization and Culture.** (1-6:6:0 ea.)
Seminar on the historical development of Western civilization and culture or non-Western civilizations and cultures.

- 234R. Readings in the History of Ideas.** (1-6:6:0 ea.)
Seminar in scientific, political, and philosophical thought based on texts treating the human legacy, society, science, ethical challenges, aesthetics, etc.

- 238R. Epistemology.** (1-6:6:0 ea.)
Epistemology for GE Social Sciences credit.

Honors 241–260: Natural Sciences

- 241R. Colloquium in the Sciences.** (1-6:6:0 ea.)

- 242R. Mathematics.** (1-6:6:0 ea.)
Seminar in mathematics.

- 243R. Physical Science, Elective.** (1-6:6:0 ea.)
Seminar in astronomy, chemistry, geology, or physics.

- 244R. Biological Science, Elective.** (1-6:6:0 ea.)
Seminar in biology, botany, microbiology, or zoology.

- 245R. Technology.** (1-6:6:0 ea.)
Seminar in computer science, engineering, technology, or related areas.

- 246R. Statistics.** (1-6:6:0 ea.)
Seminar in statistics.

- 250. Math Modeling—Toward a Personal Understanding of the World.** (3:3:0)
Developing skills in arriving at quantitative models for the world as we see it. Some math skills reviewed and some new ones introduced.

- 254R. Readings in the History of Ideas.** (1-6:6:0 ea.)
Seminar in scientific, political, and philosophical thought based on texts treating the human legacy, society, science, ethical challenges, aesthetics, etc.

- 258R. Epistemology.** (1-6:6:0 ea.)
Epistemology for GE Natural Sciences credit.

IV. Honors Arts and Sciences Upper-Division Electives

Honors 303–320: Arts and Letters

303R. Literature. (1–6:6:0 ea.)

Upper-division seminar in literature.

304R. Fine Arts. (1–6:6:0 ea.)

Upper-division seminar in art, design, music, theatre, or cinema.

305R. Philosophy. (1–6:6:0 ea.)

Upper-division seminar in philosophy or such related areas as religious and moral thought.

306R. Humanities. (1–6:6:0 ea.)

Upper-division seminar in the humanities.

307R. Language. (1–6:6:0 ea.)

Upper-division seminar in semantics, grammar, linguistics, or history of language.

310R. Civilization and Culture. (1–6:6:0 ea.)

Upper-division seminar on the historical development of Western civilization and culture or non-Western civilizations and cultures.

311R. Colloquium in Arts and Letters.

(1–6:6:0 ea.)

314R. Readings in the History of Ideas.

(1–6:6:0 ea.)

Upper-division seminar in scientific, political, and philosophical thought based on texts treating the human legacy, society, science, ethical challenges, aesthetics, etc.

315R. Readings in the Classics. (1–6:6:0 ea.)

Upper-division seminar in the classics based on key literary-philosophical texts.

318R. Epistemology. (1–6:6:0 ea.)

Epistemology for GE Arts and Letters credit.

Honors 321–340: Social and Behavioral Sciences

321R. Colloquium in the Social Sciences.

(1–6:6:0 ea.)

322R. History. (1–6:6:0 ea.)

Upper-division seminar in history or such related areas as archaeology.

323R. Behavioral Science. (1–6:6:0 ea.)

Upper-division seminar in psychology, psychiatry, organizational behavior, etc.

324R. Political Science. (1–6:6:0 ea.)

Upper-division seminar in political science, international relations, jurisprudence, or political and economic geography.

325R. Sociology. (1–6:6:0 ea.)

Upper-division seminar in sociology or family science.

326R. Anthropology. (1–6:6:0 ea.)

Upper-division seminar in anthropology or related areas.

327R. Economics. (1–6:6:0 ea.)

Upper-division seminar in economics or related areas.

328R. Education. (1–6:6:0 ea.)

Upper-division seminar in education or related areas.

329R. Business. (1–6:6:0 ea.)

Upper-division seminar in business or related areas.

330R. Civilization and Culture. (1–6:6:0 ea.)

Upper-division seminar on the historical development of Western civilization and culture or non-Western civilizations and cultures.

334R. Readings in the History of Ideas.

(1–6:6:0 ea.)

Upper-division seminar in scientific, political, and philosophical thought based on texts treating the human legacy, society, science, ethical challenges, aesthetics, etc.

338R. Epistemology. (1–6:6:0 ea.)

Epistemology for GE Social Sciences credit.

Honors 341–360: Natural Sciences

341R. Colloquium in the Sciences. (1–6:6:0 ea.)

342R. Mathematics. (1–6:6:0 ea.)

Upper-division seminar in mathematics.

343R. Physical Science, Elective. (1–6:6:0 ea.)

Upper-division seminar in astronomy, chemistry, geology, or physics.

344R. Biological Science, Elective. (1–6:6:0 ea.)

Upper-division seminar in biology, botany, microbiology, or zoology.

345R. Technology. (1–6:6:0 ea.)

Upper-division seminar in computer science, engineering, technology, or related areas.

346R. Statistics. (1–6:6:0 ea.)

Upper-division seminar in statistics.

354R. Readings in the History of Ideas.

(1–6:6:0 ea.)

Upper-division seminar in scientific, political, and philosophical thought based on texts treating the human legacy, society, science, ethical challenges, aesthetics, etc.

358R. Epistemology. (1–6:6:0 ea.)

Epistemology for GE Natural Sciences.

Other Honors Courses

499R. Honors Thesis. (1–6:0:0 ea.)

Departmental Honors General Education Courses

Selected departments offer designated Honors sections of introductory courses that meet particular General Education requirements as well as Honors requirements. In addition, Religious Education offers Honors sections of religion courses that meet other university requirements. Approved departmental Honors courses include:

Languages of Learning

First-Year Writing: Phil 105H.

Mathematics: Math 112H, 113H.

Advanced Writing: Engl 311H, 312H, 313H, 315H, 316H, MCom 320H, Phil 311H.

Arts and Sciences

Core Requirements: AHtg 100H, Biol 100H, Phys 100H, CLit 201H, 202H, Engl 201H, 202H, Hist 201H, 202H, Hum 201H, 202H, Phil 201H, 202H, PISc 110H, 201H, 202H.

Arts and Letters: ClCv 110H, Engl 230H, 251H, 282H, Hum 261H, 262H, Phil 110H, 205H, 210H, 211H, 317H, 422H, Dance 260H.

Social and Behavioral Sciences: Anthr 101H, 110H, Econ 110H, FamSc 160H, Psych 111H, Soc 111H.

Natural Sciences: Chem 111H, Geol 101H, Mbio 221H, Phscs 121H, 127H, Zool 260H, 261H.

University Requirements

Religious Education: RelA 121, 122, 211, 212, 301, 304, 320, 327, 421, 422, RelC 130, 231, 324, 325, 333, 341, 342, 351.

Students should consult the departmental listings in this catalog, the current class schedule, and the University Honors Program Course Guide for further details about these courses.

College of Biology and Agriculture

Dean: Clayton S. Huber, Professor, Food Science (301 WIDB)

Associate Dean: Richard W. Heninger, Professor, Zoology (302 WIDB)

Associate Dean: William L. Park, Professor, Economics (302 WIDB)

Assistant Dean: Steven L. Taylor (301 WIDB)

The following departments are included within the College of Biology and Agriculture:

Agronomy and Horticulture
Animal Science
Biology
Botany and Range Science
Food Science and Nutrition
Microbiology
Zoology

Courses offered in biology give students a general understanding of the fundamental principles of plant, animal, and microbial life and their relationship to the world. Specialized courses emphasizing teaching and research are offered to majors in the several branches of biological science. In addition, preprofessional training for students interested in health professions and a strong program to train secondary-level biology teachers are both available.

Agriculture has always been one of America's basic industries. Men and women engaged in agricultural research, production, and marketing must have an understanding of new scientific and technological developments and a solid foundation in the basic sciences. Students interested in agriculture may specialize by taking a four-year major that prepares for farm and ranch management, employment in related agricultural business or government, or teaching and research.

College Advisement Center

Audrey L. Megerian, Director (380 WIDB, 378-3042)

The College of Biology and Agriculture Advisement Center is designed to help students with academic needs, assisting progress from the day of orientation through graduation as smoothly as possible. The center maintains student records, advises on General Education and university requirements, coordinates scholarships, provides academic

information of all kinds, helps cut red tape, and much more. It is open from 8:00 a.m. to 5:00 p.m. weekdays.

Health Professions Advisement Center

Don D. Bloxham, Director (380 WIDB, 378-3044)

The Health Professions Advisement Center will help preprofessional students in health-related fields (medicine, dentistry, podiatry, optometry, etc.) with any academic need, give accurate counsel, and help achieve successful transition into professional schools.

School catalogs and other pertinent materials are available in this office. The advisors will help students plan preprofessional study at BYU and apply for admission to professional schools.

The Health Professions Advisement Center also serves students planning careers in such health-related fields as the following:

biomedical engineering	osteopathic
dental hygiene	medicine
dentistry	pharmacy
health administration	podiatry
medicine	physician's
optometry	assistant

Molecular Biology Programs

Students interested in preparing themselves for careers in molecular biology may do so by meeting the requirements of a molecular biology degree in any one of the six departments in the college or in the Department of Chemistry. Students are expected to meet the basic requirements of the major, including a series of courses in mathematics, physics, chemistry, basic biology, and molecular and cellular biology. See departmental sections for lists of courses that satisfy the departmental major.

Graduate Program in Molecular Biology

The College of Biology and Agriculture offers a collegewide interdisciplinary degree in molecular biology at both the master's and doctoral level. The two degrees are

integrated into the academic departments of the college and are designated as master of science in molecular biology and doctor of philosophy in molecular biology, with an indication of department affiliation. These programs are available through the following departments: Agronomy and Horticulture, Animal Science, Botany and Range Science, Food Science and Nutrition, Microbiology, Zoology.

See the departments for program details.

Conservation Biology

Students interested in ecology, environmental awareness, wildlife management, the preservation of endangered species, and the conservation of natural resources can major with a B.S. degree in conservation biology in the Departments of Botany and Range Science and Zoology. See the department of your choice for details.

Agribusiness Programs

Students interested in careers in agricultural production, food marketing, and related agribusiness industries can prepare for such careers by completing a production-agribusiness emphasis under a B.S. degree in agronomy, horticulture, animal science, or range science. These students are expected to complete departmental core courses plus the requirements for a minor in management offered by the Marriott School of Management and two agricultural economics courses offered by the Economics Department. In addition, students can prepare themselves for agribusiness careers by completing an agricultural economics emphasis under a B.S. degree in economics in conjunction with selected agricultural and business courses. See departmental listings for details.

Agricultural Economics

See Department of Economics for program details.

Ezra Taft Benson Agriculture and Food Institute

James B. Jenson, Director (B-49)

The major objective of the Benson Institute is to raise the quality of life among the people of the world through improved nutrition and enlightened agricultural practices. Emphasis is placed on teaching students who wish to work in foreign countries and on training people from those countries in agriculture and food science practices that can improve life. Research to improve agricultural practices, family nutrition, and appropriate technology is encouraged and funded.

BYU Agriculture Station

Max V. Wallentine, Director (392 WIDB)

Teaching and research in basic and applied agriculture is accomplished at BYU Agriculture Station facilities. These include animal science, agronomy, and horticulture project areas in Provo—including the Ellsworth Meat and Livestock Center. In addition, the 793-acre BYU Laboratory Farm near Spanish Fork, Utah, and the 9,388-acre BYU Skaggs Research Ranch near Malta, Idaho, are important facilities for training students.

M. L. Bean Life Science Museum

Stanley L. Welsh, Director (290 MLBM)
Douglas C. Cox, Assistant Director (290 MLBM)

Exhibits and collections of biological specimens are housed in the M. L. Bean Life Science Museum.

The museum is open Monday from 10:00 a.m. to 9:00 p.m. and Tuesday through Saturday from 10:00 a.m. to 5:00 p.m. Exhibits include habitat studies of local as well as exotic plant and animal species and a large and valuable collection of trophies from North America, Africa, and Asia.

Tours and Educational Programs. The museum offers a broad range of educational opportunities for students, from specialized graduate research in the various systematic collections housed in the museum to impromptu tours for the casual visitor. Many university classes make arrangements to utilize the extensive holdings. The museum also serves the community by providing educational opportunities for elementary and secondary schools as well as civic groups. Docent volunteers conduct educational tours and help with display preparation and general museum operation.

To make arrangements for any of the various academic opportunities, please call 378-5051.

The Botanical Collection includes herbaria of vascular plants, mosses, liverworts, lichens, algae, and fungi from many parts of the world. The vascular plant collection includes more than 10,000 species represented by more than 350,000 herbarium sheets. The collection is made up principally of plants from western North America but includes many materials from the eastern states, Europe, Mexico, and Australia. Acquisitions of plants from Alaska, Greenland, Siberia, and the Canadian Arctic have added significantly to the collections of Arctic plants. Lichens and mosses number about 45,000.

The herbarium includes more than 2,000 specimens from the Mediterranean region of Europe and from the Middle Eastern

countries of Iran and Afghanistan. The fossil plant collections contain more than 10,000 specimens.

The Zoological Collections consist of a large series of vertebrate and invertebrate species from North America and from many foreign countries. These materials are available to teachers, advanced students, and visiting scientists.

The invertebrate collections include numerous specimens of insects and their near relatives as well as many representatives of other phyla of invertebrates obtained locally and from many distant places. Medically important arthropods such as fleas, lice, mites, and ticks are represented. Collections of special interest include marine shells and over one million insects (with emphasis on butterflies, flies, and beetles). Other invertebrate groups are also represented.

The vertebrate collections consist of thousands of fish, amphibian, reptile, bird, and mammal research specimens. In addition to the representative series of local species, the vertebrate collections include birds' eggs, South and Central American birds, and Hawaiian fishes. Staff members, graduate students, and friends of the university have contributed material from Mexico, South America, Africa, Formosa, Malaya, the South Pacific islands, and other areas throughout the world. The vertebrate collections also include big game trophy collections from Africa, India, and North America.

The Lytle Preserve in southwestern Utah provides a 460-acre area as a center for natural study in an interesting desert setting.

College of Education

Dean: Robert S. Patterson, Professor,
Educational Leadership (343-E MCKB)
Associate Dean: Beverly R. Cutler, Associate
Professor, Elementary Education (343-C
MCKB)
Associate Dean: Russell T. Osguthorpe,
Professor, Instructional Science (343-B
MCKB)

The five departments in the College of Education are:

Educational Leadership
Educational Psychology
Elementary Education
Instructional Science
Secondary Education

The principal purposes of the College of Education are: (1) preparing teachers for public and private schools; (2) providing graduate programs for the preparation of school principals, counselors, school psychologists, curriculum supervisors, speech/language pathologists, clinical audiologists, and master teachers; (3) offering research-based graduate programs; and (4) researching educational processes and issues.

Education Advisement Center (EAC)

LuJeanne Peters, Supervisor (120 MCKB)

The Education Advisement Center assists students from the beginning of the freshman year through graduation and teacher certification. Students majoring in elementary education, early childhood education, special education, audiology, or speech/language pathology are advised concerning General Education and major requirements, student teaching and other field experiences, graduation requirements, and teacher certification procedures.

Secondary education majors in physical science or social science receive their total program advisement from the Education Advisement Center. All other secondary education majors receive certification advisement only from the EAC. The respective college advisement center in which the student is majoring advises regarding General Education and major requirements.

Students are encouraged to visit the EAC on a regular basis.

Acceptance into Teacher Education

Acceptance into teacher education programs in the College of Education is based on a student's performance on prescribed admissions tests as well as grades earned at the university. The college seeks students who attain high educational standards and who evidence aptitude for teaching.

Students are encouraged to take EIED 310R, ScEd 276R, or EPsy 305, 380R in their sophomore year, after which formal acceptance into professional programs in the College of Education normally occurs, based on the following:

1. A cumulative university or transfer cumulative GPA of 2.85.
2. Demonstrated competence in basic skills as evidenced by acceptable performance on the Preprofessional Skills Test (PPST).
3. Acceptable performance on the ACT.
4. Completion of prescribed General Education and other prerequisite courses.
5. Personal character that reflects the highest ideals of the university.

Students, once accepted into professional programs in the college, are expected to maintain a cumulative GPA of 2.85 during the period of their enrollment.

Withdrawals. Students who withdraw from the university or who otherwise interrupt their education (excepting spring/summer terms) must expect, on returning to the university, to meet the most recent requirements for teacher education programs.

Transfer Students. Students who transfer to the College of Education from a two-year college, another university, or another college within BYU must meet the requirements for acceptance set forth above.

Preparation of Teachers

Early Childhood Teaching. Students who want to teach kindergarten register in the College of Family, Home, and Social Sciences. All students receive advisement from the College of Education Advisement Center (120 MCKB). Prior application and acceptance are required to take the methods courses in the professional education sequence (EIED 350 series). Students should refer to the Family Sciences section of this

catalog for programs and course listings and should plan their programs with the designated advisor in the Education Advisement Center. Dual certification with elementary education is required.

Elementary School Teaching. Education majors should check with their advisor in the EAC (120 MCKB) for modifications to the program. Both an accepted application and successful completion of EIED 310R are required to begin the professional courses. These must be completed six weeks before the student wishes to begin professional courses. Applicants must demonstrate and maintain established standards for personal conduct and interpersonal skills as outlined in the program guide. The following must be completed *before* formal application to EIED 310R: minimum 2.85 GPA, FamSc 210, GE mathematics and English basic skills, and successful completion of the Preprofessional Skills Test. See program guide or undergraduate secretary in 217 MCKB for details. No D credit is allowed in the preprofessional, professional, or required subject area courses.

Students interested in elementary school teaching register in the College of Education. Prior application and acceptance are required to take the methods courses in the professional sequence (EIED 350 series). The following must be completed before formal admission to the professional program: have a minimum GPA of 2.85, be a declared elementary education major, and have successfully completed EIED 310R and a speech and hearing test. Courses and prerequisites are listed in the Elementary Education section of this catalog. Students majoring in elementary education should plan their programs with the designated advisor in the Education Advisement Center (120 MCKB).

Dual certification with early childhood education is possible. Further information may be obtained from the Education Advisement Center.

Secondary School Teaching. Students who plan a career in secondary school teaching should register in the department of their academic major, except for physical science or social science majors, who register in the College of Education. There is no major in secondary education per se, but students must complete professional education requirements as well as an academic

teaching major and minor or composite major. Students should begin their professional preparation (ScEd 276R) during the sophomore year to avoid problems scheduling the balance of the certification program. For course listings and prerequisites in this area, see the Department of Secondary Education section of this catalog. Students should plan their program with the designated advisor in the Education Advisement Center (120 MCKB).

Special Education Teaching. Students who desire to teach children with intellectual or emotional handicaps or to teach children with learning disabilities should register in the College of Education and should plan their program during the freshman year with the special education advisor in the Education Advisement Center (120 MCKB). Early planning will enable students to complete the requirements for certification in special education.

Audiology and Speech/Language Pathology. This area of study prepares students to be communication specialists in schools, hospitals, rehabilitation centers, and other agencies and in private practice. Certification and licensure in Utah and in most other states, as well as by the American Speech-Language-Hearing Association, require a master's degree.

Students interested in audiology or speech/language pathology should plan their program with the designated advisor in the Education Advisement Center (120 MCKB).

Student Teaching. The culminating experience for students in teacher education is a student teaching assignment in a public school classroom under the supervision of cooperating school teachers and university supervisors. The number of students accepted for student teaching depends on the number of professionally acceptable field positions available. Students must plan their programs carefully to meet requirements for student teaching.

Internships. Internship appointments are available through programs offered by the College of Education and may substitute for some student teaching. Internship appointments in the public schools are for a full year and carry a modest stipend. Interested students should contact the chair of the department in which they are registered.

Application for Certification

The certification of teachers is a function of the Utah State Office of Education (USOE).

Requirements for Utah certification are available in the Education Advisement Center. There are, from time to time, modifications in certification requirements. Although such modifications are not retroactive, they may still affect the uncompleted portion of a student's program.

Students who apply for Utah certification must have the recommendation of the dean of the College of Education, based on the following: (1) completion of required general and professional education courses, (2) completion of a major and a minor (if required), (3) completion of student teaching or internship, (4) a minimum GPA of 2.85, and (5) personal character that reflects the highest ideals of the university.

Students are encouraged to plan their programs with the assistance of advisors in the Education Advisement Center (120 MCKB) so that they may be assured of meeting requirements for certification.

Certification in Other States. Under reciprocity agreements, Utah certification is accepted in those states where such agreements are in effect. For specific information students should contact the Education Advisement Center.

College of Engineering and Technology

Dean: L. Douglas Smoot, Professor, Chemical Engineering (270 CB)

Associate Dean: Steven E. Benzley, Professor, Civil Engineering (270 CB)

Associate Dean: John J. Kunzler, Associate Professor, Manufacturing Engineering and Engineering Technology (270 CB)

Assistant Dean: Ronald E. Terry, Professor, Chemical Engineering (350-H CB)

Assistant Dean: David K. Anthony (280 CB)

The College of Engineering and Technology is composed of the following six departments:

Chemical Engineering
Civil Engineering
Electrical and Computer Engineering
Manufacturing Engineering and Engineering Technology
Mechanical Engineering
Technology Education and Construction Management

As we approach the twenty-first century, the world's expectation of its engineering and technical personnel will range from providing for interplanetary exploration and travel to solving such earthly problems as pollution, transportation, efficient energy use, new materials, and new products and manufacturing processes, as well as many other exciting and challenging needs.

The solution to man's present and future problems will require people trained as craftsmen, technicians, technologists, and engineers working together as a team. Each of the departments in the College of Engineering and Technology has a faculty with special training and advanced education, including years of work experience, which qualify them to prepare students for these technical careers. Each department also has modern, well-equipped laboratories that provide exciting and valuable hands-on experience.

It is very important that students understand the differences among the various college programs and decide on a career as early as possible. This is especially true for engineers and technologists. It is also important that students understand the differences between scientists and engineers. This helpful information can be obtained from the college advisement center.

Professional Bachelor's Program

The Chemical, Civil, Electrical and Computer, and Mechanical Engineering departments and the Department of Manufacturing Engineering and Engineering Technology each offer a bachelor of science degree composed of a preprofessional program and a professional program. Approximately the first two years in these departments are considered to be preprofessional, and the remaining two years constitute the professional program. Any student who is admitted to the university may select a program in any department as a possible major, and all students are encouraged to declare their intended major on first entering the university. Industrial education majors may proceed into the junior year without restriction, but engineering and technology majors may not register for upper-division departmental courses (300 level and above) until they are formally accepted into a professional program.

Students should refer to the department sections of this catalog for specific department requirements. Additional details and application forms may be obtained from the college advisement center.

College Advisement Center (CAC)

Pamela O. Williamson, Supervisor (264 CB)

As a center for students, the CAC provides up-to-date records and information and help with registration, graduation requirements, policies and procedures, fields of study, changes of major, and many other aspects of the college's academic life.

College Programs

The alignment of engineering with technology and industrial education makes it possible to offer, in a single college, a broad spectrum of educational opportunities within which students can prepare for a career in our challenging technological world. This offering encompasses four-year baccalaureate degree programs; one-year master of science, master of industrial education, master of engineering management, and master of technology management programs; and a program that

leads to a doctor of philosophy degree in engineering.

The bachelor's degree program in engineering is also excellent preparation for other professional careers such as law, medicine, and business.

General Education Requirements

All students who receive a baccalaureate degree must satisfy the university's General Education requirements. Modifications in the current General Education requirements are made for engineering and technology majors. Summaries of these requirements are available in the advisement center, 264 CB.

It is important to maintain constant progress in the major technical area because of prerequisite structure. Students are cautioned against devoting early semesters solely toward the completion of General Education requirements, thus falling behind in technical areas. Instead, follow an integrated study program of General Education and technical requirements.

Technology Education and Construction Management

The Department of Technology Education and Construction Management provides baccalaureate programs for educating industrial arts teachers for elementary, middle, junior high, and senior high schools, as well as technical education teachers for vocational and technical schools. The department also offers four-year baccalaureate programs in construction management and physical plant administration, and master's degree programs for supervisors, coordinators, and administrators in industrial and technical education. In addition, the Department of Technology Education and Construction Management cooperates with the College of Education to offer a minor in industrial education for the doctor of education degree.

Manufacturing Engineering and Engineering Technology

The Department of Manufacturing Engineering and Engineering Technology offers four-year baccalaureate programs in

electronics engineering technology, manufacturing engineering technology, and manufacturing engineering. The engineering technology programs are accredited as engineering technology programs by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology, Inc. (ABET) and are recognized by industry as among the best available. The manufacturing engineering program has recently applied for ABET accreditation.

Engineering

Engineering, with a strong emphasis on mathematics and the basic sciences, has been offered at Brigham Young University since 1952. Graduates find acceptance in the best graduate schools and in top industrial organizations. Many are in key positions in leading industries or have important assignments with government agencies. With the evident need extending well into the future for those skilled in solving technological problems, an engineering degree from BYU is a valuable professional accomplishment.

Students who plan to enroll in engineering fall semester should have successfully completed the following high school courses or their equivalents:

3 units of English

4 units of mathematics, consisting of 2.5 units of algebra, 1 unit of geometry, and 0.5 unit of trigonometry. This should qualify one to begin college mathematics with analytic geometry and calculus.

1 unit of physical science (either chemistry or physics)

1 unit of drafting or mechanical drawing

Students who have not completed these requirements should plan to enter BYU *summer term*, beginning in June. If deficiencies are not too serious, they can probably be made up by fall semester.

Each of the five engineering programs (chemical, civil, electrical and computer, manufacturing, and mechanical) leads to a four-year bachelor of science degree. Each degree program, with the exception of manufacturing engineering, is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology, Inc. (ABET). Computer engineering is an option under the accredited electrical engineering degree. The college will seek accreditation for manufacturing engineering about 1992.

To complete these programs in less total time, students can take advantage of the spring and summer terms' offerings.

Professional Registration

Engineering graduates are encouraged to become registered professional engineers. Professional registration promotes the engineering profession, enhances employment opportunities, protects the public welfare, and in many instances is a requirement. State boards have set minimum standards of competence and conduct for engineers and have established a process whereby one may become registered. There are four steps in this process: graduation from an approved four-year engineering program, passing of the Fundamentals of Engineering (FE) exam, completion of four years of acceptable engineering experience, and passing of the Principles and Practice of Engineering (PE) exam. Offered twice a year, in April and October, the FE exam should be taken near the time of graduation. Application must be made through the State Board of Registration. Those who pass the PE exam attain the status of registered professional engineer and earn the right to publicly represent themselves as an engineer. Further details on professional registration can be found in the departmental sections of this catalog and at the College of Engineering and Technology Advisement Center, 264 CB.

Prearchitectural Curriculum

Because BYU does not offer an architecture degree, it is suggested that students identify an architectural school from which to receive a degree. Then, by carefully studying its program, a student can enroll in a limited number of applicable classes at BYU. Early transfer to this selected school (unless it requires a bachelor's degree for admission) will allow a minimum credit loss. A list of accredited architecture schools and additional information can be obtained in the advisement center.

Cooperative Education—Work While You Learn

The value of on-the-job working experience cannot be overemphasized when obtained during the learning process. It adds materially to understanding and incentive and also assists with educational expenses. Several kinds of work experiences are available. The simplest arrangement, perhaps, is technical employment during the summer. Departments and the college cooperative education office work together to help students find suitable employment. BYU also has arrangements with several companies for co-op placement, wherein students work in industry for a period of time and then return to school for a period, sometimes alternating work and learning experiences several times. Students interested in work-while-you-learn experiences should contact their major department chair or the cooperative education office within the College of Engineering and Technology Advisement Center (264 CB).

In addition to cooperative education internships within the United States, internships in international settings are also available for students who are pursuing majors that focus on international curricula.

College of Family, Home, and Social Sciences

Dean: Donovan E. Fleming, Professor,
Psychology (990-B SWKT)
Associate Dean: James M. Harper, Professor,
Family Sciences (980 SWKT)

Academic Departments and Curriculum Areas

American Heritage
Anthropology
Clothing and Textiles
David M. Kennedy Center for International
Studies (See Contents for specific areas of
specialization.)
Economics
Family Sciences
Family Studies
Geography
History
Political Science
Psychology
Social Work
Sociology

Research and Academic Support Areas

Camilla Eyring Kimball Chair of Home and
Family Life
Center for Studies of the Family
Charles Redd Center for Western Studies and
Lemuel H. Redd, Jr., Chair in Western
History
Comprehensive Clinic
Family History Services
J. Fish and Lillian F. Smith Chair of Economics
Joseph Fielding Smith Institute for Church
History
Museum of Peoples and Cultures
New World Archaeological Foundation
Women's Research Institute

College Advisement Center

Larry K. Taylor, Supervisor (2254 SFLC)
Advisors are prepared to assist students in
the selection of General Education offerings
that will contribute to a broad education.
Advisors also assist faculty in offering
counsel for specific majors and in
monitoring a student's progress toward
graduation.

Purposes

The College of Family, Home, and Social
Sciences is composed of departments whose
primary focus is people.

Of particular concern is the family as the
basis of human society. Each of the basic
disciplines represented in the college has a
special contribution to make to the family.
Some are concerned with helping people to
be healthy, responsible, and caring; some
concentrate on helping families improve the
quality of life; some focus on the home as a
laboratory for family enhancement; and
some explore the relationship between the
family and the social systems that constitute
the larger society.

The instructional program of the College of
Family, Home, and Social Sciences has two
major emphases. One provides a broad
education that helps develop an appreciation
of the values that establish and strengthen
modern civilization and that prepares
individuals to contribute effectively as
citizens. The other prepares professionals to
discover truths that reveal our heritage and
to provide significant services to individuals,
families, and institutions.

Degrees Offered

Bachelor's, master's, and doctoral degrees
are offered in the college. See the individual
department and program listings in this
catalog for specific degrees offered and the
requirements for each.

Scholarships and Awards

Scholarships and awards are available to
qualified students. Applications may be
obtained from the Financial Aid Office, A-141
ASB.

Women's Studies Minor

A minor in women's studies is now being
sponsored by the Women's Research Institute
at Brigham Young University and offered
through the Department of Sociology. The
minor will give students an opportunity to
examine research and writings about
women's lives and experience, women's
issues, and gender studies.

Women's studies programs were first
created at colleges and universities in the
United States during the late seventies. Such
programs grew out of the women's
movement and increased social
consciousness about the uniqueness of
women's lives. Women's studies courses are
generally designed to acknowledge,
accentuate, and celebrate women's
experience in all disciplines.

Courses in the minor represent several
disciplines and provide a variety of
perspectives on topics relating to women's
experience and differences between women
and men.

See the Department of Sociology section of
this catalog for course requirements for this
minor.

Museum of Peoples and Cultures

Joel C. Janetski, Director (105 ALLN)

The Museum of Peoples and Cultures is
located in Allen Hall at 700 North 100 East
in Provo. Museum hours are 9:00 a.m. to
5:00 p.m. Monday through Friday. The
modest exhibits focus on the prehistory of
Utah, the American Southwest,
Mesoamerica, Polynesia, and the Near East
as well as early Mormon pioneer life. Tour
arrangements can be made by calling the
museum at 378-6112.

Educational and Research Opportunities.
Classes in museology designed to provide
students with practical experience in
collections care and management, including
computer applications, are available with
approval. Credit in archaeological research,
both field and laboratory, is also offered
with prior approval of the museum staff,
who are adjunct to the Anthropology
Department. Museology and archaeology
course listings are found in the
Anthropology section of this catalog. The
museum also employs several students each
semester to assist in collections work and
exhibit renovation.

Research entities in the museum include
the Office of Public Archaeology and the
Archaeological Technical Laboratory, both of
which offer part-time employment to
interested and qualified students. The Office
of Public Archaeology is one of the leading
archaeological contracting organizations in
the intermountain area, with a permanent

staff of eight. The technical lab specializes in botanical and minerals analyses. The museum works closely with Anthropology Department faculty, several of whom have research offices in Allen Hall. Offices of the New World Archaeological Foundation are also in the museum.

Anthropological Collections. Museum collections contain prehistoric and ethnographic artifacts from various parts of the world. The bulk of holdings are from the Southwest, Mesoamerica, Polynesia, and the Great Basin, especially Utah Valley. The museum also cares for a collection of more than 26,000 black and white and color

photographs that documents BYU archaeological research and the artifactual materials. Information on these collections is now computer accessible for interested scholars. The museum encourages students to inquire about research possibilities using its collections.

College of Fine Arts and Communications

Dean: James A. Mason, Professor, Music (A-410 HFAC)

Associate Dean: M. Dallas Burnett, Professor, Communications (A-410 HFAC)

The following departments are in the College of Fine Arts and Communications:

Art
Communications
Design
Music
Theatre and Film

As part of a tradition that provides majors and nonmajors with a broad experience in fine arts and communications, this college attempts to develop in students a sensitive understanding of people, things, and ideas. There is also a deep concern for the form and nature of messages that are shaped from matter, sound, or movement. These messages often deal with the aesthetic dimension of our lives.

The college's classroom instruction is augmented by off-campus internship programs and by on-campus laboratory exercises. In addition, student and faculty touring groups instruct and entertain Church members and friends across the globe. Journalism students who edit the *Daily*

Universe, a student laboratory newspaper, are advised by faculty professionals. KBYU-TV and KBYU-FM are also operated by the college.

Members of the faculty are competent, dedicated men and women who are concerned about the success of the young people who study here. The college also brings to campus distinguished professionals for special lectures and artistic performances. Housed in the Harris Fine Arts Center and the Brimhall Building, the college enjoys five speech and drama theatres; two concert halls; three art galleries; design, journalism, advertising, and broadcast laboratories; and multiple music practice rooms.

In the fall of 1993 the new Museum of Art will open. It is located directly north of the Harris Fine Arts Center.

College Advisement Program

Brenda Butterfield, Supervisor (D-444 HFAC)

Students can receive registration help from three major sources:

1. This catalog outlines graduation requirements in the thirty-seven areas of emphasis encompassed in the five Art,

Design, Communications, Music, and Theatre and Film departments.

2. Assigned faculty members are available to students desiring an assessment of potential performance.
3. The college advisement center keeps individual student records showing progress to date and courses needed to complete requirements. CAC advisors are available also for schedule-planning assistance.

Scholarships and Awards

Scholarships, talent awards, and grants-in-aid are available to qualified students; some are reserved strictly for high school graduates and transfer students.

Obtain applications for all scholarships and awards from the chair of the University Scholarship Committee (A-41 ASB) and specific information regarding individual qualifications from department chairs.

For information about graduate scholarships, fellowships, and grants-in-aid, see the BYU Graduate Studies Catalog.

College of Humanities

Dean: Randall L. Jones, Professor, German (2054 JKHB)

Associate Dean: Cheryl Brown, Associate Professor, Linguistics (2054 JKHB)

Associate Dean: Edward A. Geary, Professor, English (2054 JKHB)

What Are the Humanities?

The fundamental question examined by the humanities is: What does it mean to be human? And a fundamental extension of this question as it is examined in the College of Humanities at Brigham Young University is: What does it mean to be human and religious? In what artistic, philosophical, religious, and literary ways have humans understood and expressed loneliness, suffering, injustice, terror, and death? In what ways have they understood and expressed hope, joy, love, beauty, and belief in God?

The humanities curriculum develops from the attempt to answer these questions. In this curriculum the humanities student studies sculpture, painting, music, architecture, ideas, literature, and language. But in the humanities the emphasis is always on language, for it is language that does most to make us human and enable us to create a cumulative symbolic record of our experience.

The humanities student, to learn about what it means to be human, develops skills in critical reading, analytical thinking, critical interpretation, library research, and writing. These skills are basic to success in virtually any graduate program or profession.

Academic Departments

Asian and Near Eastern Languages
English
French and Italian
Germanic and Slavic Languages
Humanities, Classics, and Comparative Literature
Linguistics
Philosophy
Spanish and Portuguese

Programs and Support Areas

Center for the Study of Christian Values
in Literature
College Advisement Center

Collegewide graduate program in language acquisition
English Language Center
Humanities Research Center
International Cinema
David M. Kennedy Center for International Studies (in cooperation with the College of Family, Home, and Social Sciences)
Language credit by examination
Publications Center
Foreign Language Student Residence
Study Abroad
Summer Language Institute

College Advisement Center

Mary Anne Rich, Supervisor (3078 JKHB)

The advisement center assists students with registration, information about the majors and about General Education, changing majors, application for graduation and graduation clearance, and questions about policy and procedure. Students are encouraged to take advantage of these advisement center services.

For advisement regarding specific major requirements, substitutions within a major, career options, or graduate programs, students should consult with faculty advisors within the various departments.

Language Credit by Examination

Jerry W. Larson, Professor of Spanish;
Director, Humanities Research Center
(3060-A JKHB)

Any student enrolled at BYU whose native language is English may receive credit by special examination for certain foreign language courses for which he or she has acquired the equivalent skill or knowledge. However, this is possible only if no university credit has been given through AP, CLEP, or transfer of equivalent credit from another university or other institutions. Students whose native language is not English may not receive credit for their native language, but they may receive credit by special examination for courses in English offered through the TESL program of the Linguistics Department. They may also receive credit by special examination for a language other

than their native language as described above.

Examinations for languages taught on the BYU campus are administered by the department concerned. Examinations for other languages are administered by the coordinator of the Foreign Language Testing Program in the Humanities Research Center.

Center for the Study of Christian Values in Literature

Jay Fox, Director (3134 JKHB)

The center holds symposia, conducts various writing contests, and publishes the journal *Literature and Belief*.

English Language Center

Glen W. Probst, Director (2113-B JKHB)

The English Language Center is a resident program of intensive English language training.

Foreign Language Student Residence

Hans W. Kelling, Professor of Germanic and Slavic Languages, Coordinator (4088 JKHB)

Students who desire a more in-depth language study experience and practical application of the language under the direction of faculty and native residents may apply to live in the Foreign Language Student Residence. All activities in the individual apartments in the residence are conducted in the foreign language. Inquiries should be directed to the coordinator or to the appropriate departmental advisor for detailed information concerning opportunities for men and women in French, Russian, Italian, German, Japanese, Spanish, Chinese, Arabic, Korean, and Scandinavian languages.

Humanities Research Center

Jerry W. Larson, Professor of Spanish,
Director (3060 JKHB)

The Humanities Research Center provides technological and consulting resources to support research and teaching in the College of Humanities. Available in the center are audio, video, and microcomputer facilities in addition to optical scanning services.

Summer Language Institute

Hans W. Kelling, Professor of Germanic and
Slavic Languages, Coordinator (4088
JKHB)

During spring or summer term the College of Humanities offers an intensive program that allows total immersion in a foreign language. Students may receive from 6 to 10 credit hours, depending on the level at which one enters the program. The institute

also provides housing for those participating where the language can be applied on a practical level.

D Credit

No D credit in major or minor courses is accepted.

College of Nursing

Dean: June Leifson, Professor, Nursing (592 SWKT)

Associate Dean: Sandra Rogers, Assistant Professor, Nursing (594 SWKT)

Associate Dean: Mary Williams, Associate Professor, Nursing (591 SWKT)

College Advisement Center

Linda Stevens, Supervisor (551 SWKT)

For information regarding College of Nursing programs and admission application forms, contact the following:

Undergraduate students:

College of Nursing Advisement Center
(551 SWKT, 378-4173)

Graduate students:

Denise Gibbons, Graduate Secretary
(500 SWKT, 378-4142)

The Study of Nursing at Brigham Young University

The College of Nursing at Brigham Young University, established in 1952, is accredited by the National League for Nursing. The mission of the College of Nursing is to provide students with the broad-based knowledge and skills necessary to become nursing professionals and informed citizens. Baccalaureate graduates are prepared to function in generalist roles in hospital and community settings. They also have excellent preparation for entrance into graduate programs. Graduates of the M.S. program are prepared for a variety of advanced practice and leadership roles in the health care delivery system.

The faculty of the college are committed to creating a stimulating learning environment based on Christian principles. They maintain a broad range of research and clinical interests.

Student resources include a fully equipped learning resource center with audiovisual

and computer learning aids, a physiological research laboratory, a research center, a comprehensive family nursing clinic directed by faculty, and a state-of-the-art clinical simulation laboratory. Clinical practice opportunities exist in a variety of urban and rural hospital, home, and community settings along the Wasatch Front. Students may gain extended experiences with specialized national and international health programs.

Scholarships and Awards

Scholarships are available for undergraduate and graduate students. Applications for scholarships and information about additional sources of funding for study are available in the College of Nursing Advisement Center. Research assistantships and teaching assistantships are also available for graduate students.

College of Physical and Mathematical Sciences

Dean: William E. Evenson, Professor, Physics (270 ESC)

Associate Dean: Bill R. Hays, Professor, Computer Science (269 ESC)

Associate Dean: Robert D. Speiser, Professor, Mathematics (272 ESC)

The College of Physical and Mathematical Sciences consists of six departments:

Chemistry
Computer Science
Geology
Mathematics
Physics and Astronomy
Statistics

Freshmen who are interested in the physical and mathematical sciences but are undecided about a specific major may register in science fundamentals core

courses: Math. 112 or 110; Chem. 111 or 105; Physics 121.

College Advisement Center

Betty Lewis, Supervisor (1114 TMCB)

The advisement center provides information and help on registration, graduation requirements, policies and procedures, fields of study, changes of major, and many other aspects of the college's academic life.

Degrees Offered

Bachelor of arts or bachelor of science degrees are offered in chemistry, computer science, geology, mathematics, physics and

astronomy, and statistics. No degree is offered in the physical science or science fundamentals areas.

The master of science degree is offered in chemistry, computer science, geology, mathematics, physics, and statistics. The master of arts degree is available in mathematics. The doctor of philosophy degree is offered in chemistry, computer science, mathematics, and physics.

See specific departmental sections of this catalog for baccalaureate degree requirements. Graduate programs are detailed in the 1993-94 BYU Graduate Studies Catalog.

College of Physical Education

Dean: Elmo S. Roundy, Professor, Physical Education (212 RB)

Associate Dean: Jay H. Naylor, Professor, Recreation Management and Youth Leadership (212 RB)

Associate Dean: Joyce M. Harrison, Professor, Physical Education (214 RB)

The following departments and divisions are in the College of Physical Education:

Dance
Health Sciences
Intercollegiate Athletics
Physical Education
Physical Education Services
Recreation Management and Youth Leadership

The LDS Church, through its beliefs and teachings, has developed a unique reputation relative to health practices—one of active and vigorous living, leadership of youth, and wholesome use of time. Brigham Young University, in harmony with the objectives of the Church, provides its

members with opportunities for both participation and active, exemplary leadership.

College Advisement Center

Della M. Bown, Supervisor (205 RB)

Students are able to obtain help in planning their educational programs through the College of Physical Education Advisement Center and the respective departments.

Goals

The College of Physical Education seeks to make three significant contributions: (1) serve students and faculty, (2) extend university programs to the public, and (3) prepare professional leaders. The college sponsors an extensive health education program, a variety of physical education activity courses, youth and recreational

services, numerous intramural and extramural activities, supervised free play, and several activity clubs. High-quality intercollegiate athletic teams and dance performance groups are correlated with other programs of the college. Those majoring in one of the areas within the college find strong professional programs at both the undergraduate and graduate levels.

Physical Education Services

Free play, intramurals, and scheduling of events and facilities are all coordinated by the Division of Physical Education Services. Students, faculty members, and staff may use the physical education facilities during the evening and on Saturdays. The college encourages participation in these fun, wholesome activities, which give both diversion and development.

Student Life

Dean: Maren M. Mouritsen, Assistant Vice President; Associate Professor, Educational Psychology (380 SWKT)

Associate Dean: Ryan L. Thomas (1979) BA, JD, PhD, Brigham Young U., 1976, 1979, 1985 (380-C SWKT)

Associate Dean: Tamara M. Quick (1980) BA, Brigham Young U., 1969; MA, EdD, Columbia U., 1972, 1986 (329 ELWC)

Assistant Dean: Wayne R. Herlin, Professor, Student Development (380 SWKT)

Open Major Advisement Center

Jerry L. Jensen, Supervisor (151 SWKT, 378-3826)

Students who have not selected a major declare themselves as open major. Open major students should visit the Open Major Advisement Center at least once each semester to evaluate their records and their progress toward completion of the General

Education requirements. The center, which specializes in academic advisement, will help students choose General Education classes and a major.

J. Reuben Clark Law School

Dean: H. Reese Hansen (348-A JRCB)

Associate Dean: J. Clifton Fleming (510 JRCB)

Associate Dean: Constance K. Lundberg
(393-A JRCB)

Associate Dean: Scott W. Cameron (342
JRCB)

Assistant Dean: Kathy D. Pullins (239 JRCB)

The J. Reuben Clark Law School offers a six-semester course of graduate professional study leading to the Juris Doctor (J.D.) degree. Information about legal education,

admissions standards, and related matters can be obtained from the J. Reuben Clark Law School Bulletin, which is available through the admissions office of the Law School.

To be admitted to the Law School, an applicant must be a college graduate who has excelled academically and has scored in the upper range of the nationally administered Law School Admission Test. In addition, applicants must meet the general university

admission requirements, including the personal standards required of all students.

Apply for admission on forms provided by the Law School, and file before February 15 preceding the fall of expected enrollment in the Law School. Enrollment takes place only in the fall of each year.

For more information regarding prelegal education, consult the section of this catalog entitled Preprofessional Programs (Law).

J. Willard and Alice S. Marriott

School of Management

Dean: K. Fred Skousen, Professor,
Accounting (730 TNRB)

Associate Dean: Gary C. Cornia, Professor,
Public Management (730 TNRB)

Associate Dean: Milton E. Smith, Professor,
Business Management (730 TNRB)

Associate Dean: Bill Siddoway, Director,
External Relations (710-A TNRB)

Academic Departments

School of Accountancy and
Information Systems
Institute of Business Management
Management Communication
Managerial Economics
Institute of Public Management
Organizational Behavior
Aerospace Studies (Air Force ROTC)
Military Science (Army ROTC)

Management Advisement Center

Eldon Bott, Supervisor (460 TNRB)

Advisors are prepared to assist undergraduate students in successfully completing university, college, and major requirements, and students are encouraged to meet frequently with them. The center provides up-to-date records and information and is available to help with registration, graduation requirements, fields of study, changes in major, transfer evaluation, and clarifying policies and procedures.

Graduate Programs

See the Marriott School of Management Graduate Catalog, available from the Marriott School of Management, 730 TNRB, Brigham Young University, Provo, UT 84602. Summary information is also included in the 1993-94 BYU Graduate Studies Catalog.

The following graduate programs are offered in the Marriott School of Management (MSM):

Master of Accountancy
Master of Business Administration
Executive Master of Business Administration
Master of Organizational Behavior
Master of Public Administration
Executive Master of Public Administration

Undergraduate Programs

Two undergraduate degrees are offered by the Marriott School of Management. The first is a bachelor's degree in management, which provides a broad management education. The program is designed to assist students in acquiring knowledge, insight, maturity, competence, and a strong sense of moral and ethical character. An area of emphasis may be taken by students seeking limited specialization.

The second bachelor's degree is offered by the School of Accountancy and Information Systems to students seeking to combine accounting skills with broad management education (see the School of Accountancy and Information Systems section of this catalog for details). Accounting students interested in acquiring in-depth specialization or seeking careers in public accounting are encouraged to enroll in the Master of Accountancy Program. Both undergraduate programs consist of three phases. Phase I is the same for both programs. See information on the School of Accountancy for course sequencing in Phases II and III in the accounting program.

Phase I: Premanagement Core—The Qualifying Experience (14 hours)

I. Math 119 or equivalent (4), Econ 110 (3), Stat 222 (4), Acc 201 (3).

II. The premanagement core must be completed with at least a 2.85 GPA (no grade lower than a C-), with no more than one repeat for each class.

Applications

Because of the need to control enrollment in management programs, the competition for acceptance is keen. Those choosing to enter these majors should decide early, plan their schedules carefully, be aware of all the requirements, and stay informed about any

changes by checking often with the Marriott School of Management Advisement Center.

After completing the premanagement courses, students should make formal application to the MSM, usually during their third semester. Students not accepted into the program should work closely with advisement personnel to select a new major outside the MSM.

Requirements for application include (1) an overall GPA of 2.85, (2) a 2.85 GPA in the premanagement courses, and (3) demonstrated knowledge of computer skills, including word processing and spreadsheet analysis. Not every student meeting the minimum requirements can be accepted into the undergraduate program.

Phase II: Management Core I—The Broadening Experience (22 hours)

Note: Phase I courses must be completed before enrolling in Phase II courses.

Acc 202 (3), 341 (2); ManEc 300 (3), 301 (3); PMgt 385 (3); BusM 101, 102, 103, 104 (2); MCom 320 (3); ISys 301 (3).

Phase III: Management Core II—The Managing Experience

Note: Phase II courses must be completed before enrolling in Phase III courses.

MCom 321 (1), OrgB 321 (3), BusM 301 (3), 341 (3), 361 (3), 499 (3).

Areas of Emphasis

An additional 12 MSM upper-division hours are required for the undergraduate degree in management. These hours may be used to fulfill the requirements for an area of emphasis (15 hours are required to receive an area of emphasis in management information systems or financial services or an international co-concentration emphasis). Listings and requirements for the areas of emphasis are available at the advisement center.

B.S. Management

Areas of Emphasis

General Business
Entrepreneurship
Finance
Financial Services
Management Information
Systems
Managerial Economics
Marketing
Operations Management
Organizational Behavior
Retailing

Co-concentrations

Finance—International Business
Marketing—International
Business

For information on each emphasis, please
see individual departments in the
Management section of this catalog.

Additional Requirements

Students are encouraged to enroll in courses outside the MSM. Only 45 upper-division MSM hours count toward graduation. (In some cases, 48 hours are allowed. Check with the college advisement center.)

No more than one D grade will be allowed in MSM upper-division courses. No more than 12 semester hours of upper-division transfer credit will be accepted toward the major and only 6 hours beyond Management Core I.

Minor in Management

The Minor in Management Program is designed for the student seeking a major outside the Marriott School of Management but still desiring some exposure to fundamental business concepts, theory, and practice.

I. Prerequisite courses (12–13 hours): Acc 200 (3); Econ 110 (3); Math 110 (3); Stat 221

(3) or 222 (4). Students are encouraged to complete prerequisite courses before taking functional courses.

II. MSM functional courses (10 hours): OrgB 320 (3), BusM 300 (3), 340 (3); 380R, 381R, or 382R (1).

On completion of the above courses, students should receive clearance from the Marriott School of Management Advisement Center for the minor designation.

Graduation Application for Bachelor's Degree

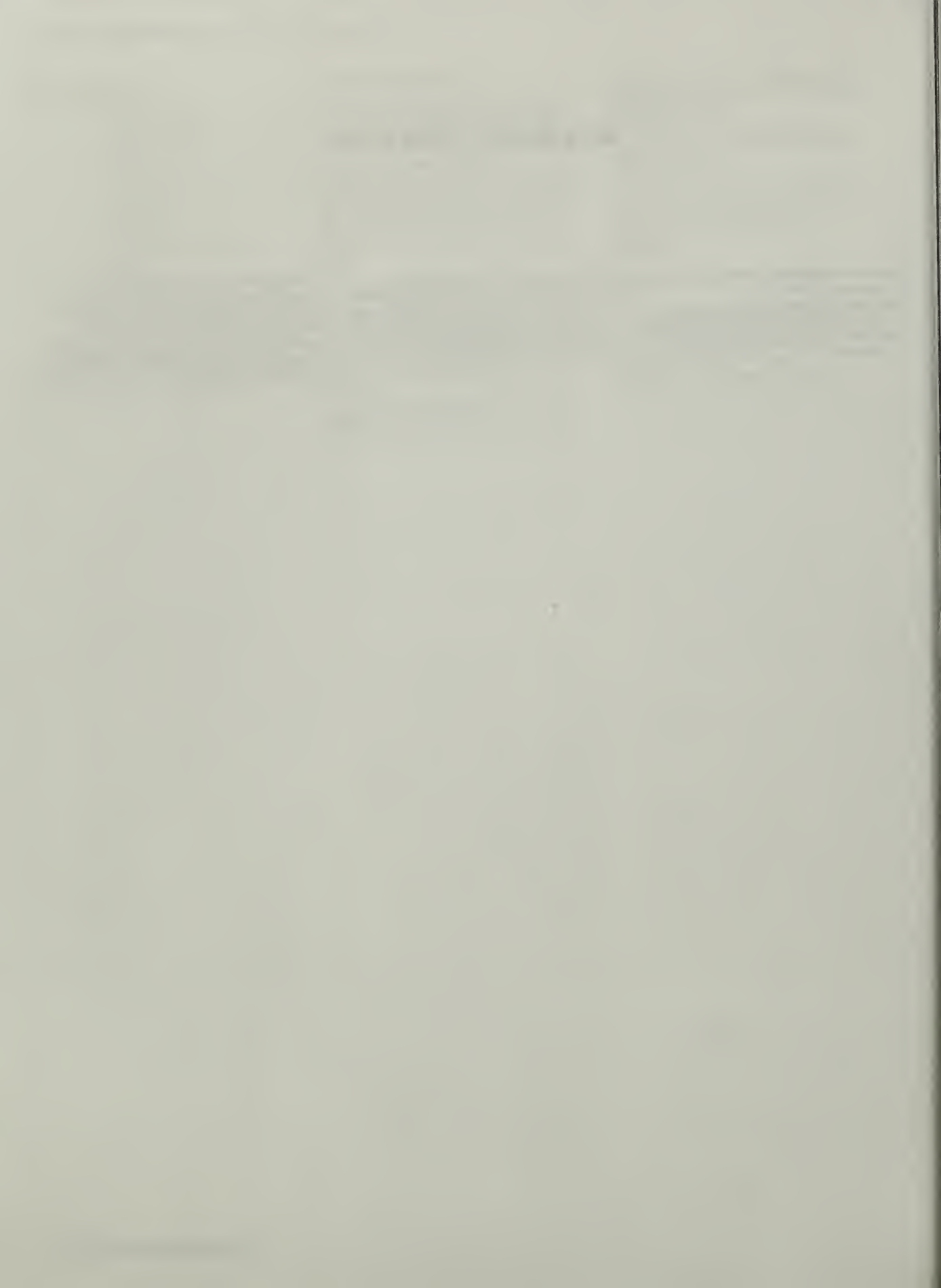
When a student has completed 86–96 earned hours (usually during the junior year), application for graduation should be initiated at the Marriott School of Management Advisement Center (460 TNRB).

Graduate Studies

Dean: Addie Fuhrman, Professor,
Psychology (B-380 ASB)
Associate Director, Graduate Services:
Christine Tolman, (B-360 ASB, 378-7307)
Office of Graduate Studies: B-356 ASB,
378-4091

For information about master's and doctoral programs, students should consult the 1993-94 BYU Graduate Studies Catalog, which may be obtained through BYU Mail Services (296 UPB) or, for those who visit the campus, the BYU Bookstore.

Application information is available through the Office of Graduate Studies and through individual departments. Applicants are invited to direct questions regarding admission to the Law School and the Marriott School of Management to 340 JRCB and 730 TNRB, respectively.



Academic Departments, Degrees, and Courses

Accounting

See Management, J. Willard and Alice S. Marriott School of.

Aerospace Studies (Air Force ROTC)

Colonel Robert M. Atkinson, Chair (380 ROTC)

Professor

Atkinson, Colonel Robert M. (1993) BA, MA, U. of Utah, 1969, 1973.

The Air Force Reserve Officer Training Corps (AFROTC) is an educational program designed to provide students the opportunity to become Air Force officers while completing requirements for an undergraduate or graduate degree. A four-year program or a two-year program is available for both men and women.

Program Requirements

Four-Year Program

The more popular and preferred program is the traditional Four-Year Program. Interested freshmen register for Aerospace Studies in the fall term, enrolling in Aerospace Studies courses in the same manner as for other college courses. There is *no military obligation* for the first two years of Air Force ROTC unless on an Air Force ROTC scholarship. During this time students learn more about the Air Force and the historical development of air power. After completing the first two years, known as the General Military Course (GMC), students may *compete* for entry into the last two years, the Professional Officer Course (POC). If accepted, students will attend a four-week summer field training encampment between their sophomore and junior years before entering the POC. Cadets in the POC study leadership, management, and national defense policy while receiving a nontaxable subsistence allowance of \$100 each academic month.

Two-Year Program

The Air Force ROTC Two-Year Program is primarily available to junior college transfers, veterans, and those who did not take the first two years of Air Force ROTC. To be eligible, students must have at least two academic years remaining either at the undergraduate or graduate level or a combination of the two. If accepted, students will attend a six-week summer field training encampment. Two-year students normally apply early in their sophomore year, attend field training the next summer, and enter the program at the beginning of their junior year.

Qualifications

1. Be a United States citizen.
2. Be a full-time student.
3. Be eighteen years of age, or seventeen years of age with parent's or legal guardian's consent.
4. Be physically qualified.
5. Be of good moral character.
6. Be in good academic standing.
7. Successfully pass the Air Force Officer Qualifying Test.
8. Have at least two academic years remaining.
9. Be interviewed and selected by a board of Air Force officers.
10. Complete a six-week field training course if a two-year cadet, a four-week course if a four-year cadet.
11. Complete all commissioning requirements as follows:
 - a. Pilot or navigator candidate: Before age 26.5.
 - b. Scholarship recipient: Before age 25 as of June 30 in eligible year of commissioning.
 - c. Non-scholarship recipient: Before age 30.

Suggested Sequence of Courses

(Two-year students follow the junior and senior schedule)

General Military Course

Freshman Year	F	W
Aeros 110, 111	1	1
Aeros 100, 101	0.5	0.5
Sophomore Year		
Aeros 210, 211	1	1
Aeros 200, 201	0.5	0.5

Professional Officer Course

Junior Year

Aeros 310, 311	3	3
Aeros 300, 301	0.5	0.5

Senior Year

Aeros 410, 411	3	3
Aeros 400R, 401R	0.5	0.5

Minor

Students desiring Aerospace Studies as a minor must complete the 14 hours of POC course work and the Air Force ROTC requirements, as well as qualify for a commission in the United States Air Force.

General Information

Textbooks, Uniforms, and Allowance.

All textbooks, uniforms, and uniform accessories are furnished by the Air Force, in addition to the tax-free allowance of \$100 per month (about \$2,000 for two years) furnished to those in the POC program.

Air Force ROTC Scholarship Program. Full tuition assistance is available to students in the two-year or four-year program based on merit. By law, scholarship recipients must be under age twenty-five as of June 30 of the calendar year during which commissioning is scheduled. Applicants with prior military service can have the age limit extended one year for each year of service, up to a maximum of four years. The scholarship includes tuition, fees, textbook allowance, and \$100 per month. Contact the department for application procedures.

Field Training. This training gives an increased understanding of the Air Force mission and operation. Students receive practical experience in leadership and management while residing on an Air Force base. At field training students receive career orientation, junior officer training, aircraft and aircrew indoctrination, survival skills, physical training, and weapons experience and learn about the function of an Air Force base. Airborne training (parachute jumping instruction) is available as an extracurricular activity to selected volunteer cadets.

Medical care, housing, food, and uniforms, as well as transportation to and from the training base, are provided. Approximately

\$450 in pay is received for four-week training and \$670 for six-week training.

Extracurricular Activities. Each Air Force ROTC student will be able to participate in a variety of extracurricular activities, including the *Arnold Air Society*, the *Color Guard*, and the *Honor Guard*.

LDS Missions. Students who desire to serve a Church mission should do so between their freshman and sophomore years. This will facilitate entrance into the advanced course. Scholarship students may have their scholarship held while they fulfill a mission as long as they do so before entering the advanced program.

Period of Nonattendance. Four-year program students in Air Force ROTC who are in a five-year university program are allowed a year of nonattendance after their senior AFROTC courses. Out-of-phase students and those who will be student teaching should consult with the department chair.

Discipline. Disciplinary training in the cadet corps is formulated and administered by the student officers. Air Force ROTC students are civilians and are not subject to military law.

Veterans. A veteran seeking a commission through Air Force ROTC may have part or all of the freshman and sophomore program waived. Allowances are paid in addition to G.I. Bill benefits.

Supplemental Courses Program (SCP). The SCP exists to enhance the career utility and officer performance of persons commissioned through AFROTC. All contract cadets must successfully complete or demonstrate proficiency in the required supplemental courses in addition to all AFROTC courses. Normally, this requirement is satisfied by completing the BYU General Education requirements in mathematics and English composition. Contact the department for details.

Foreign Language Requirement. All AFROTC scholarship cadets must demonstrate proficiency or complete at least two semesters of college instruction in a major Indo-European or Asian language before commissioning. Contact the department for details.

Physical Education Requirements for Graduation. Students successfully completing eight semesters of AFROTC leadership laboratory satisfy physical education fitness and activity requirements as described in the graduation section of this catalog. Students successfully completing four semesters of AFROTC leadership laboratory satisfy the physical education activity requirement only.

Aerospace Studies (Aeros)

Undergraduate Courses

100, 101. Leadership Laboratory—Freshmen. (0.5:0:2 ea.)

Basic fundamentals of military leadership—drill, courtesy, planning, and organizing at various levels of responsibility.

110. U.S. Air Force Organization and Strategic Forces. (1:1:0) Prerequisite: concurrent registration in Aeros 100.

Development, organization, and doctrine of the U.S. Air Force, emphasizing Strategic Force Requirements.

111. Aerospace Defense, General Purpose, and Support Forces. (1:1:0) Prerequisite: concurrent registration in Aeros 101.

U.S. Air Force Defensive Forces, General Purpose Forces, and Tactical Air Forces.

200, 201. Leadership Laboratory—Sophomores. (0.5:0:2 ea.)

As listed for Aeros 100/101. Increased emphasis on performance level.

210. The Developmental Growth of Air Power. (1:1:0) Prerequisite: concurrent registration in Aeros 200.

Development of various concepts of air power employment, emphasizing factors that have prompted research and technological change.

211. The Developmental Growth of Air Power. (1:1:0) Prerequisite: concurrent registration in Aeros 201.

Development of various concepts of air power employment, emphasizing factors that have prompted research and technological change.

300, 301. Leadership Laboratory—Juniors. (0.5:0:2 ea.) Prerequisite: approval of department chair.

As listed for Aeros 100/101. Students perform as cadet officers. Emphasis on leadership development.

305R. Leadership Laboratory—Honor Guard. (1:0:3 ea.) Prerequisite: approval of instructor.

Fundamentals of military leadership and drill with the M-1 rifle; emphasizes need for response to vested authority, with opportunity to develop confidence, military bearing, and other interpersonal skills; students perform as cadet leaders.

310. Management and Leadership. (3:3:0) Prerequisite: approval of department chair and concurrent registration in Aeros 300.

Writing, speaking, and listening as communication skills; management concepts; responsibilities and ethics for an Air Force junior officer.

311. Management and Leadership. (3:3:0) Prerequisite: approval of department chair and concurrent registration in Aeros 301.

Principles of leadership, problem solving, decisions, discipline, and human relations. Emphasis on career planning as an Air Force junior officer.

320R. Jet Pilot Introduction. (2:2:0 ea.)

400R, 401R. Leadership Laboratory—Seniors. (0.5:0:2 ea.) Prerequisite: approval of department chair.

As listed for Aeros 100/101. Senior cadets perform in leadership positions in planning and conducting all activities of the cadet corps.

410. National Security Forces in Contemporary America. (3:3:0) Prerequisite: Aeros 310, 311, and concurrent registration in 400R.

Military profession, civil-military interaction, and the forming of defense strategy.

411. National Security Forces in Contemporary America. (3:3:0) Prerequisite: Aeros 310, 311, 410, and concurrent registration in 401R.

Strategy and management of conflict and the forming and implementing of U.S. defense policy.

Afrikaans

See Germanic and Slavic Languages.

African Studies

See Kennedy Center for International Studies, David M.

Agronomy and Horticulture

Richard E. Terry, Chair (275 WIDB)

Professors

Horrocks, Rodney Dwain (1978) BS, Brigham Young U., 1962; MS, PhD, Pennsylvania State U., 1964, 1967.

Jeffery, Larry S. (1984) BS, Utah State U., 1962; PhD, North Dakota State U., 1966.

Jolley, Von Dale (1977) BS, Brigham Young U., 1970; MS, PhD, Iowa State U. of Science and Technology, 1974, 1976.

Nelson, Sheldon D. (1972) BS, Brigham Young U., 1967; PhD, U. of California, Riverside, 1971.

Robison, Laren R. (1971) BS, MS, Brigham Young U., 1958, 1959; PhD, U. of Minnesota, Minneapolis, 1962.

Terry, Richard Ellis (1980) BS, Brigham Young U., 1972; MS, PhD, Purdue U., 1974, 1976.
 Walser, Ronald H. (1980) BS, Brigham Young U., 1968; PhD, Utah State U., 1975.
 Williams, C. Frank (1971) BS, MS, Utah State U., 1967, 1968; PhD, Oregon State U., 1971.

Associate Professor

Ellsworth, D. Delos (1975) BS, Arizona State U., 1958; MS, Cornell U., 1959.

Assistant Professor

Allen, Phil S. (1990) BS, MS, Brigham Young U. 1983, 1985; PhD, U. of Minnesota, 1990.

Associate Research Scientist

Webb, Bruce L. (1978) BS, MS, Brigham Young U., 1972, 1978.

Part-Time Faculty

Hunter, Norah T. (1983) BS, MS, Brigham Young U., 1982, 1992.

Adjunct Professors

Brown, Seeley, Thorup, Walker, Wallace

Emeriti

Allred, R. Chase (1955) BS, Brigham Young U., 1948; MS, Kansas State U., 1949; PhD, U. of Nebraska, Lincoln, 1952.

Ashton, Clarence D. (1951) BS, Brigham Young U., 1929.

Reimschuessel, Ernest F. (1941) BA, MS, Brigham Young U., 1940, 1951.

Programs and Degrees

BS Agronomy

Emphases:

Agribusiness-Production
 Crop and Soil Science
 Environmental Science

BS Horticulture

Emphases:

Agribusiness
 Environmental Landscape
 Design and Management
 Horticulture Science
 Turfgrass Science

BS Molecular Biology

Emphases:

Agronomy
 Horticulture

MS Agronomy

MS Horticulture

MS Molecular Biology (collegewide interdisciplinary degree)

Graduates in agronomy or horticulture are employed in the world's largest and most diverse industry—agriculture.

Opportunities to make important contributions to people's most basic needs are plentiful and rewarding.

Scholarships are available on a competitive basis to qualified majors, transfer students, and new students.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

I. No D credit in agronomy and horticulture courses will apply to graduation requirements.

II. No more than 4 hours of R courses will apply to graduation.

III. At least 10 hours of departmental courses must be completed at BYU.

Note: Courses followed by an asterisk (*) fulfill General Education requirements. Each student majoring in the department should contact the college advisement center (380 WIDB) to obtain recommendations for General Education courses.

BS Agronomy

Agronomy deals with the scientific principles and practices of field crop production (including crop ecology and physiology, genetics and plant breeding, plant nutrition, and molecular biology); the fertility, chemistry, physics, irrigation, classification, management, and conservation of soils; and the interrelationship of plants, soils, water, weather, and mankind's actions and their net effect on quality of the environment.

Agribusiness-Production Emphasis

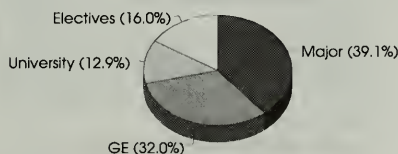
I. Major courses: AgHrt 151, 152, 282, 283, 305, 331, 491R; 199R, 399R, 493R, or 497R; 7 credit hours from AgHrt 201, 205, 214, 220, 303, 306, 308, 330, 390R, 407, 425, 441, 460, 462, 466, 471, Botny 480, Zool 331.

II. Supporting courses: Acc 200; AgHrt 240 or CS 130, 131, or 142; Botny 220; Chem 101*, 103, 152; Comms 150; Econ 110*, 260; Stat 222*.

III. Supplemental courses: After consulting with faculty advisor, complete 10 credit hours from AgHrt 345 or OrgB 320*; AgHrt 346 or BusM 300*; Econ 210 or BusM 340*; BusM 380R, 381R, or 382R.

**Select these courses for a minor in management.

Summary of Degree Requirements for Agribusiness-Production Emphasis



1. Total hours	128.0
2. Major hours*	50.0
3. General Education requirements	41.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0

Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	20.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

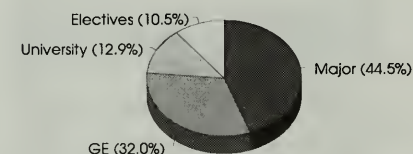
Crop and Soil Science Emphasis

I. Major courses: AgHrt 151, 152, 282, 283, 303, 305, 331, 407, 441 or 460; 491R; 199R, 399R, 493R, or 497R; 10 credit hours from AgHrt 201, 205, 214, 220, 306, 308, 330, 390R, 425, 459, 462, 466, 471.

II. Supporting courses: AgHrt 240 or CS 130, 131, or 142; Botny 220; Chem 105*, 106, 107.

III. Supplemental courses: After consulting with faculty advisor, complete 18 credit hours from Botny 210, 276*, 341, 342, 350, 440, 480; Chem 223, 351, 352, 353, 367, 481; Comms 150; Econ 110*; Geog 120, 405; Geol 111, 351, 411; Math 112*, 113; Mbio 221*, 222; OrgB 320; Phscs 105* or 121; 106 or 122; 137*; Stat 222*.

Summary of Degree Requirements for Crop and Soil Science Emphasis



1. Total hours	128.0
2. Major hours*	52.0–62.0
3. General Education requirements	41.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	8.5–18.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer	

credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

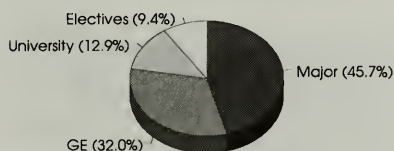
Environmental Science Emphasis

I. Major courses: AgHrt 201, 214, 282, 283, 303, 407, 491R.

II. Supporting courses: Chem 105, 106, 107; one class from AgHrt 240 or CS 130, 131, or 142; 20 credit hours from AgHrt 151, 152, 303, 308, 514; Botny 350, 351; ChEn 411; CivE 351, 550, 580; Geol 435, 436; Hlth 570; Range 215, 225.

III. Supplemental courses: After consulting with faculty advisor, complete 20 credit hours from AgHrt 205, 317, 320, 331, 371, 390R, 471, and 497R or 399R; Botny 220, 250, 440; Chem 223, 351, 352, 353; Econ 110*, 240; Geog 101, 310; Geol 101, 111; Math 112*, 113; Mbio 221*, 222; OrgB 320; Phscs 105*, 106, 107, 108; or 121, 122, 137*; Stat 222*.

Summary of Degree Requirements for Environmental Science Emphasis



1. Total hours 128.0
2. Major hours ♦ 55.0–62.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 8.5–15.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BS Horticulture

Horticulture deals with the production, handling, processing, and storage of fruit and vegetable crops, flowers, and other ornamental plants. Included is the physiology of growth and development and

post-harvest ripening, shipping, and storage. Also part of horticulture are: landscape planning and design for home and community beautification, turfgrass care and production, golf course and park management (includes soil and plant nutrition, and the interrelationship of physiology, disease, insects, and environment), and greenhouse and nursery operations.

Agribusiness Emphasis (Horticulture)

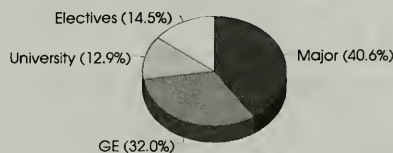
I. Major courses: AgHrt 101, 220, 282, 283, 491R; 199R, 399R, 493R, or 497R; 15 credit hours from AgHrt 103, 112, 201, 205, 214, 305, 310, 317, 318, 319, 320, 331, 371, 390R, 402, 431, 451, 459, 471; Botny 480; Zool 331.

II. Supporting courses: Acc 200; Botny 220; Chem 101*, 103, 152; AgHrt 240 or CS 130, 131, or 142.

III. Supplemental courses: After consulting with faculty advisor, complete Econ 110*, 260; OrgB 320** or AgHrt 345; BusM 300** or AgHrt 346; BusM 340** or Econ 210; BusM 380R, 381R, or 382R; Stat 222*.

**Select these courses for a minor in management.

Summary of Degree Requirements for Agribusiness Emphasis



1. Total hours 128.0
2. Major hours ♦ 52.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 18.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

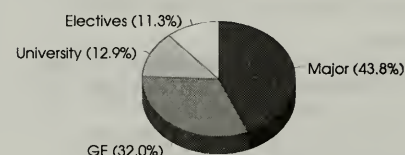
Environmental Landscape Design and Management Emphasis

I. Major courses: AgHrt 101, 103, 210, 220, 282, 283, 319, 320, 399R, 491R; 8 credit hours from AgHrt 112, 201, 205, 214, 305, 312, 317, 318, 331, 371, 390R, 402, 407, 471, 493R, 497R.

II. Supporting courses: AgHrt 240 or CS 130, 131, or 142; Botny 205, 210, 220, 480; Comms 150, Des 102*, RMYL 583.

III. Supplemental courses: After consulting with faculty advisor, complete 10 credit hours from Acc 200, Art 100, 103, 203R; Botny 350, 440; BusM 340; Chem 101*, 103, 152; CM 155; Econ 110*; TecE 209; OrgB 320; Psych 359; RMYL 425, 483, 485, 586; Stat 222*.

Summary of Degree Requirements for Environmental Landscape Design and Management Emphasis



1. Total hours 128.0
2. Major hours ♦ 51.0–61.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 9.5–19.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Horticulture Science Emphasis

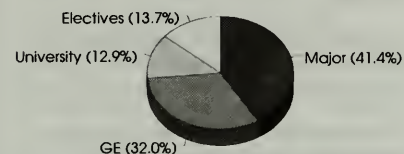
I. Major courses: AgHrt 101, 220, 282, 283, 491R; 199R, 399R, 493R, or 497R; 20 credit hours from AgHrt 103, 112, 201, 205, 214, 305, 310, 312, 317, 318, 319, 320, 331, 371, 390R, 402, 407, 431, 451, 459, 471.

II. Supporting courses: Botny 220; AgHrt 240 or CS 130, 131, or 142; Chem 101*, 103, 152 or Chem 105*, 106, 107.

III. Supplemental courses: After consulting with faculty advisor, complete 20 credit hours from Acc 200; Botny 205, 210, 276*, 321, 341,

342, 350, 440, 480; BusM 256, 340; Chem 181, 223, 351, 352, 353, 481; Comms 150; Econ 110*; Geog 120*, 231; Geol 101; Mcbio 221*, 222; Stat 222*.

Summary of Degree Requirements for Horticulture Science Emphasis



1. Total hours 128.0
2. Major hours ♦ 48.0–58.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 12.5–22.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

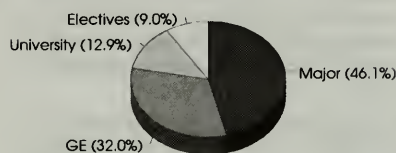
Turfgrass Science Emphasis

I. Major courses: AgHrt 220, 282, 283, 305, 319, 331, 371, 402, 407, 491R; 199R, 399R, 493R, or 497R; 10 credit hours from AgHrt 103, 201, 214, 317, 320, 390R, 471.

II. Supporting courses: AgHrt 240 or CS 130, 131, or 142; Botny 220, 440, 480; Chem 101*, 103, 152 or Chem 105*, 106, 107; Comms 150; OrgB 320; Phscs 105*.

III. Supplemental courses: After consulting with faculty advisor, complete 10 credit hours from Acc 200; Botny 205, 276*, 350; BusM 256, 340; Geog 120*; Chem 181; Econ 110*; Math 111, 112*, or 119*; Mcbio 221*, 222; Phscs 106, 137*; Psych 111*, 359; RMYL 583; Stat 222*.

Summary of Degree Requirements for Turfgrass Science Emphasis



1. Total hours 128.0
2. Major hours ♦ 54.0–64.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 6.5–16.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Molecular Biology

Enormous advances are being made in manipulating the genetic materials of living organisms to create new and diverse biological products. Molecular biology will play a key role in the designing of new crops and new uses and capabilities of old crops. This area of study combines biology and agriculture in a novel and exciting way and opens doors for unique employment opportunities or advanced degree programs.

Agronomy Emphasis

I. Major courses: AgHrt 151, 220, 240, 282, 283, 459, 491R; 199R, 399R, 493R, or 497R.

II. Supporting courses: Biol 130*; Botny 341, 342, 440, 485; Mcbio 441, 442; Math 112*, 113; Phscs 105*, 106, 107, 108; Chem 105*, 106, 107, 351, 352, 353, 481, 586.

III. Recommended elective: Mcbio 351.

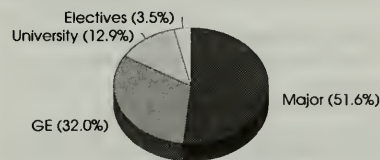
Horticulture Emphasis

I. Major courses: AgHrt 101, 220, 240, 282, 283, 459, 491R; AgHrt 199R, 399R, 493R, or 497R.

II. Supporting courses: Biol 130*; Botny 341, 342, 440, 485; Mcbio 441, 442; Math 112*, 113; Phscs 105*, 106, 107; Chem 105*, 106, 107, 351, 352, 353, 481, 586.

III. Recommended elective: Mcbio 351.

Summary of Degree Requirements for BS Molecular Biology



1. Total hours 128.0
2. Major hours ♦ 66.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 4.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Agronomy Minor

AgHrt 151, 152, 282, 283, and 8 additional upper-division credit hours in crop or soil science. No R-suffix courses accepted.

Horticulture Minor

AgHrt 101, 220, 282, and 8 additional upper-division credit hours in horticulture. No R-suffix courses accepted.

Agronomy and Horticulture (AgHrt)

Undergraduate Courses

101. Introduction to Horticultural Science. (2:2:0) F

Basic principles of plant science and horticultural practices; overview of the horticultural industry.

103. Home Landscape Design. (3:3:0) W

Design and composition as applied to home grounds development.

112. Floral Design. (2:1:2) F, W, Sp

Principles of design and practical methods of arranging flowers and other plant materials for home and professional use. Fee.

151. Crop Science. (3:3:0) F

Scientific principles of crop production; soil-plant environmental relationships, classification and distribution of farm crops, crop improvement, tillage, and rotation.

152. Crop Science Laboratory. (1:0:3) F

Prerequisite: AgHrt 151 or concurrent registration.

Identification of seeds and crops; familiarization with germination, growth, and morphological development of crops.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

201. Environmental Agriculture Issues. (1:1:0) W

Current issues relating to food crop production and urban agriculture.

205. World Food Crops. (3:3:0) F, W

Recommended: Biol 100 or 130.

World food crops and their utilization by man; emphasizes the origin, biology, ecology, production, and importance of crops as human food sources.

210. Herbaceous Plant Materials. (2:1:2) W

Identification and landscape use of flowers and groundcovers.

+Economics 211. Economics of Agricultural Production. (3:3:0)

214. Environmental Science. (3:3:0) W

Sources of soil, water, and air pollution, resource management, pollution control, bioremediation, nutrient cycles, and global climate changes.

220. Plant Growth and Reproduction. (3:2:2) W

Propagation of plants by seeds, cuttings, budding, and grafting.

240. (AgHrt-AnSc) Computer Applications to Agriculture. (2:2:0) F, W, Sp

Personal computer use in agriculture; emphasizes use of tools, languages, and system development.

282. Introduction to Soil Science. (3:3:0) F, W

Prerequisite: concurrent registration in AgHrt 283 for all majors. Recommended: one semester of college chemistry and Math 100.

Physical, chemical, and microbiological properties of soils that affect plant growth and crop production.

283. Introduction to Soil Science Laboratory. (1:0:3) F, W

Prerequisite: concurrent registration in AgHrt 282. Recommended: Chem 103, Math 100, or equivalent.

Laboratory techniques in determining soil's physical, chemical, and fertility properties.

303. Soil Genesis and Taxonomy. (4:2:4) F

Prerequisite: AgHrt 282. Recommended: Geol 111.

Genesis and taxonomy of world soils, including field description and laboratory characterization of soil profiles. Field trips required.

305. Soil Fertility. (4:3:3) W

Prerequisite: AgHrt 282, 283, Chem 105 (or 101 and 103), Math 110.

Soil fertility, plant nutrition, and fertilizer use.

306. (AgHrt-AnSc-Range) Feed and Forage Evaluation. (1:0:3) F

Prerequisite: AnSc 207. Chemical, in vitro, and in vivo techniques for estimating nutrient value and intake of feeds and harvested or grazed forages.

308. Soil and Water Conservation. (2:2:0) F

Prerequisite: AgHrt 282.

Soil and water management, erosion control, and land use to maintain soil fertility and permanent agricultural production.

310. Small Fruit Science. (2:2:0) F odd yr.

Propagating, planting, growing, and handling grapes, strawberries, and other bush-type fruits.

312. Advanced Floral Design. (3:2:3)

Prerequisite: AgHrt 112 or instructor's consent.

Theory and principles of artistic design using plant materials. Emphasis on post-harvest physiology and the floral industry network. Fee.

317. Urban Horticulture. (2:2:0) F odd yr.

Prerequisite: AgHrt 101.

Selection, ecology, and appraisal of plant material for the urban environment.

318. Greenhouse Management. (4:4:0) F

Prerequisite: AgHrt 101.

Construction and management of commercial greenhouses, emphasizing production of major greenhouse crops.

319. Turf Science. (2:1:2) F

Prerequisite: AgHrt 101.

Management of turf relative to climate, soil, and use on the golf course, park, and private areas.

320. Urban Forestry. (4:4:0) W even yr.

Prerequisite: AgHrt 101, 220, or instructor's consent.

Culture and use of woody and ornamental plants; emphasizes overall urban landscape.

330. (AgHrt-Range) Range and Pasture Plants. (3:3:3) W

Identification, characteristics, phenology, distribution, site adaptation, forage value, and response to management of significant range and pasture plants.

331. Weed Science. (3:2:3) F

Recommended: AgHrt 151, 282.

Principles of weed science; ecology; economic losses; cultural, mechanical, biological, and chemical controls; and herbicide characteristics and use.

345. (AgHrt-AnSc-Range) Farm and Ranch Planning and Management. (3:2:2) W

Planning, implementation, and control principles and procedures for managing farm and ranch businesses; accounting and business analysis, budgeting, economic principles, structure, adjusting for risk and uncertainty.

346. (AgHrt-AnSc-Range) Agriculture Finance and Business Organization. (3:3:0) F

Prerequisite: Econ 110, Acc 201, or equivalent.

Planning business financial needs, costs and sources of credit, cash flow, capital investment analysis, business organization, and estate planning.

347. (AgHrt-AnSc-Range) Agricultural Law. (1:1:0) W

Legal matters that affect agricultural business, including torts, contracts, water, and real property.

371. Turf-integrated Pest Management. (2:2:0) W even yr.

Identifying and controlling turfgrass pests, emphasizing environmental soil and cultural conditions as they interact to influence control strategies.

390R. Special Topics in Agriculture. (1-3:1-3:0 ea.)

Various topics of importance in agriculture.

399R. Cooperative Education. (1-4:1-4:0 ea.) F, W, Sp, Su Prerequisite: departmental approval.

Off-campus internship.

402. Irrigation and Drainage of Turf. (2:2:0) F odd yr.

Irrigation and drainage principles applied to turfgrass management, including irrigation systems and irrigation scheduling techniques.

407. Introduction to Soil Physics. (3:3:0) W

even yr. Prerequisite: AgHrt 282, Chem 105, Math 110, Phscs 105.

Physical environment of soils as affected by energy, solutions, gases, and organic material.

425. Farm and Ranch Appraisal. (3:3:0) F

Principles and concepts of valuation and appraising as they apply to farms and ranches, including a study of the cost, sales comparison, and income approaches.

431. Olericulture. (1:1:0) F even yr.

Recommended: AgHrt 220.

Selection, cultural practices, harvesting, and storing of vegetable crops.

441. (AgHrt-Range) Harvested Forage Crops. (2:2:0) W even yr.

Recommended: AgHrt 330.

Principles of production, mechanical harvesting, storage, and utilization of forage crops.

451. Pomology. (4:4:0) W even yr.
Recommended: AgHrt 220.

Fundamentals of commercial tree fruit production in temperate zones.

459. Plant Breeding. (3:3:0) F odd yr.
Prerequisite: Botny 276 or 341.

Genetics and methods of plant breeding related to improving agronomic and horticultural crops.

460. Crop and Soil Management. (3:3:0) W
Recommended: AgHrt 282.

Basic agricultural sciences applied to crop production, including crop yield parameters. For majors in agronomy, agricultural economics, and animal science.

462. (AgHrt-AnSc-Range) Grazing Management. (2:2:2) W even yr.
Recommended: Range 330.

Principles and practices for managing the grazing animal-forage complex. Field trip required.

466. (AgHrt-Range) Range and Pasture Development. (3:2:3) F Recommended: Range 330.

Plant control, seeding, fertilization, mechanical treatments, and livestock-handling facilities on range and pasture land. Field trips required.

471. Pest Management. (2:2:0) W
Recommended: AgHrt 101 or 151.

Cultural, chemical, and biological control of pests of horticultural and field crops; emphasizes safe use of pesticides.

491R. Undergraduate Seminar. (1:1:0 ea.) F, W

Current information in agronomy and horticulture.

493R. Selected Agricultural Production Practices. (1-3:Arr:Arr. ea.) W odd yr.
Prerequisite: instructor's consent.

Extended field course to acquaint students with economic and production problems and practices in important commercial agricultural areas.

497R. Special Problems. (1-2:2:0 ea.) F, W, Sp, Su

Seniors specializing in agronomy or horticulture conduct research on a selected problem.

Advanced Undergraduate or Graduate Courses

511. Soil Physics. (3:3:0) W even yr.
Prerequisite: AgHrt 282, Chem 105, Math 113.
Recommended: Phscs 121.

Physical relationships of water, heat, and gases in soils; physical and chemical properties of clays. Mathematical modeling of physical properties and transport processes.

514. Soil Microbiology. (3:2:3) W odd yr.
Prerequisite: Chem 106, 107, or equivalent.

Ecology and role of soil microorganisms in nutrient cycling, decomposition of organic matter and waste materials, and degradation of agricultural chemicals in soil.

520. Saline and Sodic Soils. (3:2:3) F even yr.
Prerequisite: AgHrt 302, 305, Chem 105, 106, 107, Math 110.

Physical and chemical properties of saline and sodic soils and waters—their diagnosis, reclamation, and management for crop production.

540. Crop Physiology. (3:3:0) F even yr.
Prerequisite: AgHrt 151, 305, 460, Botny 440.

Plant-soil-climate relationships; crop management practices related to physiological processes in plants.

550. Physiological Development of Horticultural Plants. (3:3:0) F on dem.
Prerequisite: AgHrt 318, 320; 431 or 451; Botny 440.

Developmental phenomena in horticultural plants, emphasizing seed physiology, plant growth regulators, and plant stress responses.

559. (AgHrt-Botny) Plant Breeding. (2:2:0) W even yr. Prerequisite: AgHrt 459 or equivalent, Botny 341.

Genetics and methods of plant breeding related to improving agronomic and horticultural crops.

560. Soil and Plant Analysis. (3:2:4) W
Prerequisite: AgHrt 305 or Chem 223.

Laboratory chemical analysis of soils and plant materials in soil and plant research.

595. Agricultural Experimentation: Design and Analysis. (2:2:0) Sp Prerequisite: Stat 501 or equivalent.

Planning, experimental design, and techniques of analysis in agriculture.

598R. Advanced Topics. (1-2:2:0 ea.) F, W, Sp, Su
Prerequisite: instructor's consent.

Advanced study of selected agricultural topics.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

605. Soil-Plant Relationships. (3:3:0)

694R. Seminar. (1:1:0 ea.)

697R. Research. (1-9:Arr:Arr. ea.)

698R. Master's Project. (1-6:Arr:Arr. ea.)

699R. Master's Thesis. (1-9:Arr:Arr. ea.)

American Heritage (AHTg)

100. American Heritage. (3:3:0) Honors and Independent Study also.

Synthesis of American constitutional and economic principles, and patterns of historical development.

American Sign Language

See Linguistics.

American Studies

See Kennedy Center for International Studies, David M.

Ancient Scripture

See Religious Education in Academic Departments, Degrees, and Courses section of this catalog.

Animal Science

N. Paul Johnston, Chair (375 WIDB)

Professors

Hoopes, Keith H. (1957) BS, Utah State U., 1957; DVM, Washington State U., 1956.
Johnston, N. Paul (1971) BA, Brigham Young U., 1966; MS, Oregon State U., 1967; MBA, U. of Utah, 1969; PhD, Oregon State U., 1971.

Orme, Leon E. (1969) BS, Utah State U., 1953; MS, U. of Tennessee, Knoxville, 1955; PhD, Michigan State U., 1958.

Park, Robert L. (1965) BS, Brigham Young U., 1956; MS, PhD, Cornell U., 1958, 1962.

Wallentine, Max V. (1962) BS, Utah State U., 1955; MS, PhD, Cornell U., 1956, 1960.

Associate Professors

Kellems, Richard O. (1986) BS, Brigham Young U., 1969; MS, PhD, Oregon State U., 1975, 1976.

Roeder, Beverly L. (1990) BA, Wittenberg U., 1978; DVM, Ohio State U., 1982; MS, Kansas State U., 1986; PhD, Pennsylvania State U., 1990.

Thwaites, Richard N. (1990) BS, New Mexico State U., 1974, DVM, Colorado State U., 1981.

Assistant Professors

Pace, Ronald T. (1961) BS, MS, Brigham Young U., 1955, 1958.

Silcox, Roy W. (1992) BS, Brigham Young U., 1981; MS, PhD, North Carolina State U., 1984, 1986.

Special Instructor

Hawkins, Ernest W. (1976) BS, MS, Brigham Young U., 1978, 1984; PhD, U. of Wyoming, 1988.

Adjunct Professors

Bagley, Clark, Davis, DeGering, Francks, Mortenson, Park, Parrish, Pew, Rees, Roper, Thomas

Emeriti

Gardner, Robert W. (1966) BS, Utah State U., 1958; MS, PhD, Cornell U., 1962, 1964.

Shumway, R. Phil (1949) BS, Utah State U., 1947; MS, U. of Minnesota, Minneapolis, 1949; PhD, Utah State U., 1959.

Shupe, Merrill Grant (1980) DVM, Washington State U., 1956.

Wiltbank, James N. (1981) BS, Brigham Young U., 1951; MS, PhD, U. of Wisconsin, Madison, 1952, 1955.

Programs and Degrees

BS Animal Science

Emphases:

Agribusiness-Production
Veterinary Technology
Science-Preveterinary Medicine

BS Molecular Biology

MS Animal Science

MS Molecular Biology (collegewide interdisciplinary degree)

The various curricula in the Department of Animal Science offer specialization and employment opportunities for the following: (1) livestock management and production; (2) meat, dairy, and food processing industries; (3) molecular biology; (4) sales consultants and representatives for agricultural businesses; (5) animal health technology personnel as assistants to the veterinary practice and related fields; (6) advanced study to graduate and veterinary schools; (7) federal and state agencies (extension, meat grading and inspection, etc.).

Transfer students majoring in animal science must earn at least half their credits in their major field while in residence at Brigham Young University. Transfer students should see an advisor before enrolling in lower-division courses.

Preveterinary students will find special instructions listed in the Preprofessional Programs section of this catalog.

Students planning to attend a veterinary school or graduate school after completing their work at BYU may select either the science or molecular biology major. Fulfilling the required courses for these majors will usually meet the science requirements for postgraduate work. Please note, however, that each school has its own specific course requirements for admission. Students should check with their advisor for details.

Students who desire horsemanship skills in handling, grooming, health management, feeding, equipment, judging and selection, hauling, trail riding, breeding, training, showing, and organizing and directing horse shows may obtain a suggested course sequence from the Animal Science Department.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Animal Science

I. Major courses: AnSc 100, 121, 122, 207, 212, 240, 492; two courses from 310, 312, 315, 321, 325.

II. Only 5 hours of D credit in required supporting courses and no grades lower than a C- in animal science courses will be accepted for graduation.

Agribusiness-Production Emphasis

I. In addition to above core requirements: AnSc 307 and one course from 310, 312, 315, 321, 325.

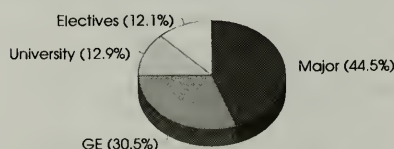
II. AgHrt 151 or 282; Stat 221; Chem 101, 152, 181, or equivalent chemistry; Acc 200; Econ 110, 210, 260; BusM 300.

III. Complete A or B below:

A. AnSc 221 and three courses from 400, 405, 415, 420, 425.

B. OrgB 320; BusM 340; 380R, 381R, or 382R; and one course from AnSc 400, 405, 415, 420, 425.

Summary of Degree Requirements for Agribusiness-Production Emphasis



1. Total hours	128.0
2. Major hours ♦	57.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	15.5
6. 40 hours upper-division GPA requirement of 2.0	

- Estimated semesters to graduate
13 hours per semester 10.0
16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

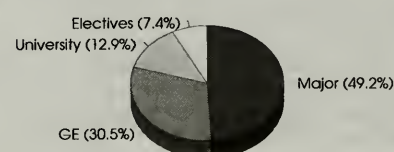
Veterinary Technology Emphasis

I. In addition to above core requirements: AnSc 308 and one course from 400, 405, 410, 415, 420, 425.

II. AnSc 250, 251, 353, 355, 356, 357, 358, 391, 480, 481, and 4 hours of 359R.

III. Mcbio 221, 222; Zool 318; Chem 101, 152, 181.

Summary of Degree Requirements for Veterinary Technology Emphasis



1. Total hours	128.0
2. Major hours ♦	63.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	9.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

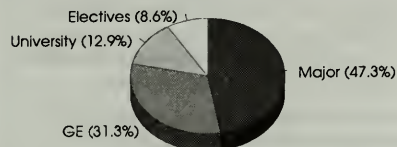
Science-Preveterinary Medicine Emphasis

I. In addition to above core requirements: AnSc 291; 307 or 308; one course from 400, 405, 410, 415, 420, 425.

II. Econ 110; Mcbio 221, 222; Chem 105, 106, 351, 352, 353, 581; Stat 221 or 222; Botny-Mcbio-Zool 341, 342; Phscs 105, 106, 107, 108.

III. Preveterinary students must satisfy courses required by the school of veterinary medicine for which they are applying.

Summary of Degree Requirements for Science-Preveterinary Medicine Emphasis



1. Total hours	128.0
2. Major hours ♦	60.5
3. General Education requirements	40.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	11.0
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Molecular Biology

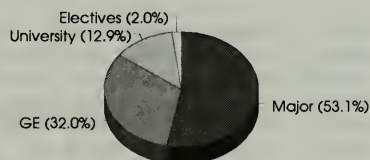
I. Complete departmental and other supporting courses as specified by department chair.

II. Math 112, 113; Phscs 105, 106, 107, 108; Chem 105, 106, 107, 351, 352, 353, 581, 586.

III. Biol 130; Botny-Mcbio-Zool 341, 342; Mcbio 441, 442; AnSc 307 or 308.

IV. Recommended: Mcbio 351.

Summary of Degree Requirements for BS Molecular Biology



1. Total hours	128.0
2. Major hours ♦	68.0
3. General Education requirements	41.0
Core	16.0
First-Year Writing	3.0

Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	2.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor

Minimum of 15 credit hours including AnSc 121, 122, 207; two classes from 307, 308, 310, 312, 315, 321; one class from 325, 400, 405, 410, 415, 420, 425.

Animal Science (AnSc)

Undergraduate Courses

100. Agricultural Orientation. (1:1:0) F
Planning a successful career in agriculture; selecting curriculum, setting goals, and developing study habits and personal traits. Historical review of American agricultural education and research.

121. Principles of Animal Production. (3:3:0) F, W
Introduction to principles and practices of livestock and animal product industries, including small animals.

122. Principles of Animal Production Laboratory. (1:0:3) F, W Prerequisite: AnSc 121 or concurrent registration.
Laboratory demonstrations of principles and practices of livestock and animal product industries, including small animals. Veterinary skills emphasized.

124. (AnSc-PE) Equitation (Horsemanship). (0.5:0:2) F, W, Sp Prerequisite: rider weight limit of 200 lbs. or instructor's consent.
Handling, grooming, saddling, and suppling horse and rider. Western and English theory used, emphasizing the independent seat and use of aids. Fee.

191R. Special Topics in Animal Production. (0-2:Arr:Arr. ea.)
Training in selected areas of animal production.

199R. Cooperative Education. (1-3:Arr:Arr. ea.) F, W, Sp, Su Prerequisite: consent of cooperative education coordinator.
Work experience evaluated by supervisor and posted on student's transcript.

207. Principles of Animal Nutrition. (3:3:0) F
Digestive system, digestive physiology, and nutrient metabolism of animals.

212. Comparative Animal Physiology and Anatomy. (4:3:2) F
Structure and functions of the animal body.

221. Livestock and Meat Evaluation and Selection. (3:2:4) F
Live animal and carcass evaluation of beef cattle, sheep, and swine; live dairy cattle and horse judging.

231R. Intermediate Equitation. (1:0.5:3 ea.) F, W, Sp Prerequisite: AnSc 124.
Schooling movements; use of aids; horse show and gymkhana events. Training techniques using Western and English theory. Fee.

240. (AnSc-AgHrt) Computer Applications to Agriculture. (2:2:0) F, W, Sp
Personal computer use in agriculture; emphasizes use of tools, languages, and system development.

250. Applied Office Procedures. (1:1:0) F
Office procedures, veterinary terminology, client relations, and computer techniques for the veterinary technician.

251. Animal Restraint and First Aid. (1:0:1) W
Restraint and first aid techniques for pet, laboratory, domestic, and wild animals.

291R. Veterinary Medicine Seminar. (0.5:1:0 ea.) W
Preview into veterinary medicine as a profession. Application procedure and preparation for veterinary school.

306. (AnSc-AgHrt-Range) Feed and Forage Evaluation. (1:0:3) F Prerequisite: AnSc 207.
Chemical, in vitro, and in vivo techniques for estimating nutrient value and intake of feeds and harvested or grazed forages.

307. Applied Animal Nutrition. (3:2:2) F even yr. Prerequisite: AnSc 207.
Principles of formulating feeds.

308. Pet and Laboratory Animal Nutrition. (2:2:0) F odd yr. Prerequisite: AnSc 207.
Nutrition and feeding principles of dogs, cats, horses, and laboratory animals.

310. Reproductive Physiology of Livestock. (3:2:2) F Prerequisite: AnSc 212, Biol 100, or equivalents.
Physiology of reproduction relating to fertility in livestock and small animals.

312. Principles of Animal Disease. (3:3:0) W Prerequisite: AnSc 212 or equivalent.
Principles of disease in domestic animals with emphasis on organ systems affected; prevention and control measures.

315. Genetics of Domestic Animals. (3:3:0) W Prerequisite: Math 100 or equivalent; Biol 100 or equivalent.

Molecular genetics, gene regulation, Mendelian genetics, genes in population, livestock improvement, and systems of breeding.

321. Growth, Composition, and Products. (3:2:2) W Prerequisite: AnSc 207, 212.

Physiological mechanisms and principles that explain growth and composition, lactation, and fiber production in domestic animals.

325. Principles of Meat. (3:2:3) F, Sp

Eating quality, grades, selection, preparation, and preservation of meat. Laboratory experiences in slaughtering, retail cutting, and further processing.

326R. Topics in Meat Science. (1:0:0 ea.)

Selected topics and experiences in meat processing, including fresh, sausage, and cured.

328. Meat Processing Methods. (3:2:3) W

Science and techniques of meat preservation, including cured products; varieties of fresh, cooked, and dry sausages; jerky.

331R. Advanced Equitation. (1:0.5:3 ea.) F, W, Sp Prerequisite: AnSc 231R or instructor's consent.

Learning and teaching western horsemanship skills and all aspects of handling and training horses. Fee.

345. (AnSc-AgHrt-Range) Farm and Ranch Planning and Management. (3:2:2) W

Planning, implementation, and control principles and procedures for managing farm and ranch businesses; accounting and business analysis, budgeting, economic principles, structure, adjusting for risk and uncertainty.

346. (AnSc-AgHrt-Range) Agriculture Finance and Business Organization. (3:3:0) F Prerequisite: Econ 110, Acc 201, or equivalent.

Planning business financial needs, costs and sources of credit, cash flow, capital investment analysis, business organization, and estate planning.

347. (AnSc-AgHrt-Range) Agricultural Law. (1:1:0) F, Sp

Legal matters that affect agricultural business, including torts, contracts, water, and real property.

353. Diseases of Companion and Laboratory Animals. (2:2:0) W

Applied studies of dogs, cats, gerbils, hamsters, guinea pigs, amphibians, and rabbits.

355. Veterinary Radiology. (2:1:3) F Prerequisite: AnSc 212, Math 100 or 110.

Applying veterinary radiology, particularly taking, developing, and caring for X-ray film.

356. Veterinary Pharmacology. (2:1:3) F Prerequisite: Chem 101, 103.

Pharmacology for the veterinary technician.

357. Veterinary Anesthesiology. (2:1:3) W Prerequisite: AnSc 355, 356, or instructor's consent.

Anesthesiology for the veterinary technician.

358. Veterinary Surgical Assistance. (2:1:3) W Prerequisite: AnSc 355, 356, 357, or instructor's consent.

359R. Veterinary Technology Preceptorship. (1-9:0:Arr. ea.) F, W, Sp, Su

Supervised on-the-job training in a veterinary clinic.

391. Veterinary Technology Laboratory Methods. (3:2:2) W Prerequisite: Mcbio 221, 222.

Laboratory procedures for veterinary technicians; specimen collection, handling, processing, and evaluation.

392R. Preveterinary Preceptorship. (1-2:0:Arr. ea.) F, W, Sp, Su

Supervised on-the-job exposure to veterinary medicine under a clinical setting, supplemented with academic assignments.

399R. Cooperative Education. (1-9:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of cooperative education coordinator.

On-the-job experience in livestock or meat production practices, veterinary medicine, or research. On- and off-campus opportunities.

400. Beef Production and Management Systems. (2:1:3) F Prerequisite: core courses or instructor's consent.

Developing beef management systems.

401R. Topics in Beef Cattle Science. (1-2:0:0 ea.) On dem.

Training in the nutrition, genetics, reproduction, and management of beef cattle.

405. Dairy Production and Management Systems. (3:2:3) W Prerequisite: core courses or instructor's consent.

Developing dairy management systems.

406R. Topics in Dairy Science. (1:Arr.:Arr. ea.) On dem.

Training in the nutrition, genetics, reproduction, and management of dairy cattle.

410. Horse Production and Management Systems. (3:2:2) W Prerequisite: AnSc 124, core courses, or instructor's consent.

Developing horse management systems.

411R. Topics in Horse Science. (1:0:0 ea.) On dem.

Developing skills and techniques in management and horsemanship.

415. Poultry Science. (2:2:1) F even yr. Prerequisite: core courses or instructor's consent.

Genetics, physiology, breeding, nutrition, diseases, management systems, and marketing of poultry products.

416R. Topics in Poultry Science. (1:0:0 ea.) On dem.

Training in poultry nutrition, physiology, breeding, health, and management.

420. Sheep and Wool Production and Management Systems. (2:1:2) W Prerequisite: core courses or instructor's consent.

Developing sheep and wool management systems.

422R. Topics in Sheep and Wool Science. (1-9:0:0 ea.) On dem.

Training in sheep and wool nutrition, physiology, breeding, health, sanitation management, facilities, and records.

425. Swine Production and Management Systems. (2:1:3) F odd yr. Prerequisite: core courses or instructor's consent.

Developing swine management systems.

426R. Topics in Swine Science. (1-2:0:0 ea.) On dem.

Specialized training in swine nutrition, breeding, health, and management decisions.

431R. Advanced Topics in Livestock and Meat Evaluation. (1-2:0:3 ea.) F, W Prerequisite: instructor's consent.

In-depth work in livestock evaluation and selection and meat judging. Includes animal and carcass grading and participation in intercollegiate livestock and meat judging contests. Field trips required.

432R. Dairy Cattle Evaluation and Selection. (1-2:0:3 ea.) F, Sp Prerequisite: instructor's consent.

Evaluation and selection of cows and heifers of the five major U.S. breeds. Identification of superior sires by record analysis. Participation in intercollegiate dairy cattle judging contests. Field trips required.

462. (AnSc-AgHrt-Range) Grazing Management. (2:2:2) W even yr. Recommended: Range 330.

Principles and practices for managing the grazing animal-forage complex. Field trip required.

463. Artificial Insemination of Farm Animals. (2:1:2) F Prerequisite: AnSc 310.

Advantages and disadvantages of various techniques of artificial insemination of farm animals presented, discussed, and practiced. Collecting, processing, and care of semen.

464. Reproductive Management of Farm Animals. (3:1:6) W Prerequisite: AnSc 310.

Application of management principles associated with artificial insemination, estrus synchronization, embryo transfer, pregnancy detection, and record management.

480. Large and Small Animal Clinic 1. (3:1:6) F Prerequisite: AnSc 355, 356, 357, 358.

Collection and analysis of blood, urine, and tissues. Nursing, surgical, and autopsy procedures.

481. Large and Small Animal Clinic 2. (3:1:6) W Prerequisite: AnSc 480.

Continuation of AnSc 480 in cooperation with selected veterinary clinics.

492. Seminar. (1:1:0) F, W

Critical examination of current literature in animal science and industry.

Advanced Undergraduate or Graduate Courses

+Statistics 501, 502. Statistics for Research Workers 1, 2. (5:5:0 ea.)

+Zoology 503. Research Orientation. (1:1:0)

+Zoology 504. Research Methodology. (1:0:3)

507. Advanced Animal Nutrition. (4:3:3) W Prerequisite: AnSc 207; Chem 152, 181.

Functions of nutrients in metabolism, methods for assessing nutrient utilization and requirements.

510. Advanced Reproductive Physiology. (4:3:3) W Prerequisite: AnSc 310.

Endocrinology and techniques for research and improvement of livestock reproduction.

574. (AnSc-Botny) Introduction to Population Genetics. (3:3:0) F Prerequisite: introductory courses in genetics and statistics.

Quantitative study of factors influencing changes in gene frequencies in natural and domestic animal and plant populations.

591R. Selected Topics in Animal Science. (0.5–3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: instructor's consent.

595R. Special Problems in Animal Science. (0.5–2:0:Arr. ea.) F, W, Sp, Su Prerequisite: instructor's consent.

599R. Cooperative Education. (2–9:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: approval from department cooperative education coordinator.

On-the-job experience in livestock or meat production practices, veterinary medicine, or research. On- or off-campus opportunities.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

692R. Seminar. (1:1:0 ea.)

698R. Master's Project. (1–9:0:0 ea.)

699R. Master's Thesis. (1–9:0:0 ea.)

Anthropology

John P. Hawkins, Chair (945 SWKT)

Professors

Berge, Dale L. (1968) BS, MA, Brigham Young U., 1961, 1964; MA, PhD, U. of Arizona, 1967, 1968.

Forsyth, Donald W. (1979) BA, MA, Brigham Young U., 1971, 1972; PhD, U. of Pennsylvania, 1979.

Hawkins, John P. (1974) BS, Brigham Young U., 1970; MA, PhD, U. of Chicago, 1972, 1978.

Matheny, Ray T. (1964) BA, MA, Brigham Young U., 1960, 1962; PhD, U. of Oregon, 1968.

Associate Professor

Janetski, Joel C., (1983) BA, Brigham Young U., MA, PhD, U. of Utah, 1977, 1983.

Assistant Professors

Johnson, David J. (1987) BA, MA, PhD, U. of Utah, 1972, 1982, 1987.

Knowlton, David C. (1990) BA, U. of Utah, 1978; MA, PhD, U. of Texas, Austin, 1982, 1988.

Instructor

Clark, John E. (1990) BS, MA, Brigham Young U., 1976, 1979.

Adjunct Assistant Professor

Wilde, James D. (1984) BA, U. of New Mexico, 1972; MA, PhD, U. of Oregon, 1978, 1985.

Emeriti

Jakeman, M. Wells (1946) BA, U. of Utah, 1931; MA, U. of Southern California, 1932; PhD, U. of California, Berkeley, 1938.

Sorenson, John L. (1971) BS, MA, Brigham Young U., 1951, 1952; MS, California Inst. of Technology, 1952; PhD, U. of California, Los Angeles, 1961.

Programs and Degrees

BA	Anthropology
BA	Anthropology (Sociocultural)
BA	Anthropology Teaching
MA	Anthropology

Anthropology's central aim is to explain how and why the world's people are so different in some ways yet similar in others. Data for such study most often come from intensive scientific field study of the full round of life of a single culture.

Distinctive contributions are made by anthropologists wherever social and cultural differences offer opportunities. Social services, business, schools, development projects, medicine, and law all offer significant careers, and recent concern with environmental protection has opened up others. University teaching and research positions are limited in growth, but highly qualified students can find positions after obtaining the PhD degree.

Archaeology provides methods for learning about the world's peoples who are no longer living; thus it is an important part of the anthropological family of special skills and interests. Social and cultural anthropology use the field methods mentioned above for studying contemporary situations of both technologically complex and technologically simple peoples. Linguistic, biological, and psychological anthropology are other areas of concern addressed by this department.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

Each student wishing to major in anthropology should arrange through the department office to counsel with a faculty advisor and prepare a proposed sequence of study. Following this, the student should meet with the department chair for final approval of the program.

Undergraduate students are allowed some, but not excessive, specialization. All degrees are in the field of anthropology.

No D credit is applicable to any degree program.

BA Anthropology

I. Anthr 101, 110, 300, 305, 309.

II. Students in sociocultural emphasis should take Anthr 309; those in the archaeological emphasis should take Anthr 215.

III. Complete 9 hours with a geographic area focus:

- Students in sociocultural emphasis should select from Anthr 317, 325, 326, 327, 330, 340, 343, 345, 390R.
- Students in archaeological emphasis should select from Anthr 355, 370, 376, 378, 380, 390R, 465.

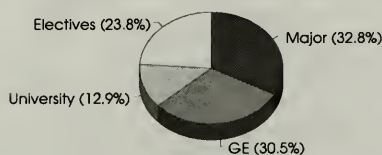
IV. Complete 9 hours with a theory focus:

- Students in sociocultural emphasis should select 9 hours from Anthr 405, 430, 431, 432, 433, 436, 438, 439.
- Students in archaeological emphasis should select 6 hours from Anthr 405, 430, 431, 432, 433, 436, 438, 439 and 3 hours from Anthr 251 or 252.

V. Field methods: Students in socio-cultural emphasis should take Anthr 442, 495; those in archaeological emphasis should take Anthr 455R (6 hours) and 446R (3 hours).

VI. Electives from Anthropology Department offerings excluding Anthr 199R, 280, 399R, 454R, 599R, but including up to 3 hours of Washington Seminar credit offered through Political Science Department.

Summary of Degree Requirements for BA Anthropology



1. Total hours 128.0
2. Major hours* 39.0–45.0
3. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 27.5–33.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

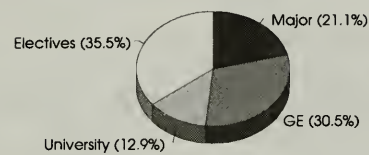
*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA Anthropology (Sociocultural)

Because the sociocultural major is designed to accommodate the varying interests of students from a range of other disciplines, it is only available to students completing an additional major in another field. Its purpose is to allow students with other majors to add the perspectives that anthropology is uniquely qualified to provide.

- I. Anthr 101, 305, 309, 442, 495.
- II. 6 hours from Anthr 405, 430, 431, 432, 433, 436, 438, or 439.
- III. 6 hours from Anthr 317, 325, 326, 327, 330, 340, 343, 345, 347, 390R.
- IV. Electives from Anthropology Department courses excluding Anthr 199R, 280, 399R, 454R, 599R.

Summary of Degree Requirements for BA Anthropology (Sociocultural)



1. Total hours 128.0
2. Major hours* 27.0
3. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 45.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA Anthropology Teaching

See Anthropology in the Secondary Education section of this catalog for information about both the teaching major and teaching minor.

Minor

A minor in anthropology requires 16 hours taught in this department; no more than two courses in addition to Anthr 108R may be lower division. No D credit is allowed.

Anthropology (Anthr)

Undergraduate Courses

101. Social/Cultural Anthropology. (3:3:0) Honors also.

Aspects of society and culture: kinship, beliefs, economy, and political order among peoples worldwide. Methods and perspectives used in social/cultural anthropology.

108R. Anthropological Films. (1:0:2 ea.)

Examination of other cultures through ethnographic or archaeological film. Can be taken separately or concurrently with Anthr 101 or 110.

110. Introduction to Archaeology. (3:3:0) Honors also.

Review of great archaeological discoveries about the ancient world. Overview of world prehistory.

199R. Cooperative Education: Museology. (1–3:Arr.:Arr. ea.) Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

207. Experiments in Ancient Technology. (3:1:2)

Processes by which tools and other objects were produced anciently; experimental reproduction and use of ancient tools.

215. Introduction to Archaeology: Method and Theory. (3:3:0)

Field and analytic methods and their relevance to data acquisition; use of theory and the relation of theory to methods.

251. Archaeological Cultures of North America. (3:3:0)

Cultural developments north of Mexico before Columbus; North American Indians and their lifeways and culture before European contact.

252. Archaeological Cultures of the Old World. (3:3:0)

Cultural developments in Europe, Near East, Africa, and Asia from Neolithic times through the Iron Age; emergence of civilization and earliest urban states.

280. Archaeology and the Scriptures. (3:3:0) Evening Classes only.

The Bible and the Book of Mormon compared with archaeological findings on early civilizations.

300. Biological Anthropology. (3:3:0)

Relationships between human biology, environment, social structure, and culture. Concepts and data on race, primates, evolution, population genetics, growth, and sociobiology.

301. Human Osteology. (2:1:2)

Identification and treatment of skeletal material found in archaeological excavations.

305. Theory in Anthropology. (3:3:0)

Historical development of problems, methods, theories; major figures in anthropology. Current state of the discipline.

309. Language in Culture and Society. (3:3:0)

Sociocultural categories and processes as expressed through, and determined by, language. Semiotics: language as sign system. Ethnosemantics, syntactic analysis, translation problems, ethnography of speaking/communication.

- 312. Intercultural Communication.** (3:3:0)
Communication processes as affected by proxemic, kinesic, language, social, institutional, worldview, and value differences and other aspects of culture. Seminar/workshop: theory, research methods, applications.
- 317. Native Peoples of North America.** (3:3:0)
Indian groups at the time of the European arrival; social organization, beliefs, values, economy, and adaptation to environment.
- 325. Ethnography of Latin American Society.** (3:3:0)
Anthropological understanding of Latin American society, including Indians, Blacks, Mestizos, peasants, workers, elites, religion, economy, and other complex social processes.
- 326. Central American Society.** (3:2:Arr.)
History, culture, society, and life among peoples of Mexico and Central America.
- 327. Ethnography of Andean Society.** (3:3:0)
Historic and modern society of the Andean Nation: Bolivia, Ecuador, and Peru.
- 330. Peoples of Africa.** (3:3:0)
Political, economic, and social organization, family life, language, worldview, religion, ritual, artistic expression, ecological adaptation, and contemporary development issues among rural and urban sub-Saharan peoples.
- 340. Peoples of the Middle East.** (3:3:0)
Ecology, social organization, beliefs, etc., of nomadic, rural, and urban groups between western Africa and Pakistan.
- 341R. Japan.** (1–3:3:0 ea.)
Social and cultural considerations. Comparison and contrast with USA.
- 343. Chinese Culture and Society.** (3:3:0)
Cultural and social institutions of traditional and modern China, including Mainland China, Taiwan, Hong Kong, etc.
- 345. American Culture.** (3:2:Arr.)
Unity and diversity in U.S. life. Social/cultural change processes illustrated and analyzed. Anthropological study of complex cultures. Seminar-type course involves substantial reading, writing, discussion.
- 346. Anthropology of Mormonism.** (3:3:0)
Intensive analysis of Mormon society and culture using a range of anthropological perspectives.
- 347. Military Life and United States Culture.** (3:3:0)
Work, family life, community, and culture in the U.S. military. Analysis of U.S. and foreign duty; implications for military leaders.
- 348. Understanding School Culture.** (3:3:0)
Concepts and methods for understanding the world of the school from the perspective of the socially and culturally diverse participants who inhabit it.
- 349. Museums and Culture.** (3:3:0)
Museums in society. Cultural foundations of museum content and sociology of museum use. Analyzing museum studies literature with on-site visits to area museum.
- 351. Archaeology and the Bible.** (3:3:0)
Setting and context of the Bible as clarified and supplemented from archaeology, history, and related studies. Archaeological methods.
- 355. Mesoamerican Archaeology.** (3:2:Arr.)
Cultural-environment bases of ancient civilizations in Mexico and Central America. Olmec, Maya, Toltec, and Aztec cultures.
- 365. South American Archaeology.** (3:3:0)
Archaeological history of South America: Peru, Bolivia, and Ecuador.
- 370. Great Basin Ethnography and Archaeology.** (3:3:0)
In-depth survey of ethnography and prehistory of Great Basin culture, as well as a history of anthropological research. Emphasizes hunter-gatherer adaptations.
- 376. Southwestern Archaeology.** (3:2:Arr.)
Prehistory of Anasazi, Hohokam, and other cultures of the Southwest. Theoretical and methodological problems; relation of ancient to ethnographic cultures.
- 378. Near Eastern Archaeology.** (3:2:Arr.)
Peoples and culture history in Mesopotamia, Syria, Palestine, Egypt, 3500–500 B.C. Substantial reading, writing, discussion.
- 380. Historical Archaeology.** (3:2:Arr.)
Archaeological study, excavation, and restoration of sites like Nauvoo and Williamsburg. Substantial reading, writing, and discussion.
- 390R. Special Topics in Anthropology.** (1–3:3:0 ea.) Independent Study also.
Subjects related to unique faculty expertise, such as Utah, the Aztecs, and the Olmecs.
- 399R. Cooperative Education: Museum Projects.** (1–6:0:6 ea.) Prerequisite: instructor's consent.
Technical and educational tasks in the Museum of Peoples and Cultures under faculty direction.
- 405. Advanced Social Theory and Debates.** (3:3:0)
Survey of concerns in social theory since the 1970s; interaction of French and Anglo-American positions as manifested in anthropological debate.
- 420. Language and Cultural Insight.** (3:3:0)
Students will demonstrate language competence and increase cultural awareness using an "uncommon language." Interview, analysis, and writing skills emphasized. Document will be in uncommon language with translation and report in English.
- 421. Business and Japanese Society.** (1–3:3:0)
Relationship of culture and society to Japanese business practices and institutions. Overview and analysis of characteristics of selected aspects of Japanese business.
- 430. Moral and Ritual Institutions.** (3:3:0)
Anthropological approaches to religion; its content and relation to other social institutions in societies ranging from gatherers to industrialists.
- 431. The Family, Marriage, and Kinship.** (3:3:0)
Nature of kinship; parent-child, sibling, grandparental relationships. Genealogical basis of society: family, lineage, clan, kindred organization. Marital status; in-law relations; joking and avoidance behavior; divorce.
- 432. Political and Legal Institutions.** (3:3:0)
Power, politics, law, the state, rebellion and revolution, warfare, hegemony, etc., in simple and complex societies as approached from social theory and anthropology.
- 433. Economic Institutions.** (3:3:0)
Social context of production, distribution, and consumption in nonindustrial societies; technology; exchange and redistribution of resources. Currency, property rights, capital, recruitment, and rewards of labor.
- 436. Symbolic Anthropology.** (3:3:0)
Social use and understanding of semiotics, signs, symbols, and other meaningful forms as critically constitutive of culture.
- 438. Social Stratification.** (3:3:0)
Anthropological consideration of organized social inequality, focusing on class, caste, gender, and ethnicity.
- 439. Theory of Complex Societies.** (3:3:0)
Anthropological approaches to complex societies—from those historically of at least state level to the modern integrated world system.
- 442. Ethnographic Skills.** (3:2:Arr.)
Methods, rationale, limitations, and ethical issues of participant observation, interviewing, quantitative measurement, and other procedures of ethnographic fieldwork. Local field project.
- 446R. Lab Skills for Archaeology.** (1–6:Arr:Arr. ea.) Prerequisite: Anth 455R.
Analytical and laboratory techniques as part of a BYU-sponsored archaeological project.
- 447. Applying Anthropology.** (3:3:0)
Prerequisite: 12 hours of anthropology credit.
Seminar-workshop. Anthropological principles and methods applied to business, education, communications, development projects, health sciences. Careers, ethics.
- 454R. Field School Preparation.** (1:1:1 ea.)
- 455R. Field School of Archaeology.** (1–6:0:Arr. ea.)
Training and experience in excavation at a BYU-sponsored dig.

470. Museology. (3:1:4)

Philosophy, methods, and techniques of the planning, operation, and promotion of museums as educational and research institutions.

495. Ethnographic Field Project. (3:0:Arr.)

Individual field project approved by two faculty: conduct field work, maintain field notes, and write a paper incorporating both descriptive and analytic components.

496R. Research. (1-3:Arr.:Arr. ea.)

Prerequisite: consent of supervising instructor.

Field or library research.

497. Directed Readings. (3:Arr.:0)

Prerequisite: consent of supervising instructor.

Reading 2,500 pages on a stated topic.

499R. Senior Thesis. (1-5:0:0 ea.)

Advanced Undergraduate or Graduate Courses

505. Anthropological Theory. (3:3:0)

Development of anthropological theory and current issues in anthropological thought.

534. Social Anthropology. (3:3:0)

Political, economic, and social institutions in cultural systems. Emphasizes issues.

537R. Communication and Culture. (3:3:0 ea.)

Course designed for higher-level work load while attending Anthr 309.

550. (Anthr-Ling) Sociolinguistics. (3:3:0)

Research and theory in anthropological linguistics and sociolinguistics.

551. (Anthr-Ling) Anthropological Linguistics. (3:3:0)

Language in culture and society: development, typology, and description.

590. Biological Anthropology. (3:0:0)

Issues in human genetics, diversity, and origins.

599R. Federal Agency Internship. (1-6:0:0 ea.)

Earning credit while employed in federal agency archaeology. Agencies include the BLM and U.S. Forest Service.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

605. Archaeological Method and Theory. (3:3:0)

615. History of Archaeological Thought. (3:3:0)

621. Issues in Great Basin Prehistory. (3:3:0)

623. Issues in Historic Archaeology. (3:3:0)

625R. Issues in Mesoamerican Prehistory. (3:3:0 ea.)

627. Issues in Near Eastern Prehistory. (3:3:0)

629. Issues in Southwestern Prehistory. (3:3:0)

655R. Field School Supervision. (2:0:Arr. ea.)

672. Special Scientific Techniques for Archaeology. (3:3:0)

690R. Seminar. (2-3:3:0 ea.)

694R. Readings. (1-3:0:0 ea.)

695R. Research. (1-3:0:0 ea.)

696R. Museum Projects. (1-3:0:Arr. ea.)

699R. Master's Thesis. (1-9:0:0 ea.)

Arabic

See Asian and Near Eastern Languages.

Art

Robert L. Marshall, Chair (B-509 HFAC)

Professors

Barsch, Wulf E. (1974) BFA, Werkkünsterschule-Hanover, West Germany, 1968; MA, MFA, Brigham Young U., 1970, 1971.

Christensen, James Cal (1976) BA, MA, Brigham Young U., 1967, 1968.

Day, Michael D. (1983) BA, Brigham Young U., 1961; MA, San Jose State U., 1968; EdD, Stanford U., 1973.

Kimball, W. Wayne, Jr. (1984) BA, Southern Utah State Coll., 1968; MFA, U. of Arizona, 1970.

Marshall, Robert L. (1969) BA, MA, Brigham Young U., 1966, 1968.

Myer, Peter L. (1972) BA, Brigham Young U., 1956; MFA, U. of Utah, 1959.

Associate Professors

Allen, Von (1984) BA, MA, Edinboro State Coll., 1973, 1976; MFA, Syracuse U., 1983.

Bule, Steven (1984) BA, Brigham Young U., 1976; PhD, Ohio State U., 1987.

Hadlock, Neil (1990) BFA, MFA, Brigham Young U., 1966, 1971.

Hamilton, Charles Mark (1974) BA, Brigham Young U., 1967; MA, U. of Utah, 1972; PhD, Ohio State U., 1978.

Hill, Sherron D. (1981) BS, Weber State Coll., 1965; MA, PhD, U. of Iowa, 1971, 1973.

Smith, Bruce Hixson (1977) BA, Brigham Young U., 1964; MFA, U. of Utah, 1968.

Assistant Professors

Beattie, Donna Kay (1989) BSE., Emporia State U., 1963; MA, U. of Missouri, 1985; PhD, U. of Kansas, 1990.

Gehring, Brent D. (1982) BFA, MFA, Brigham Young U., 1969, 1972.

Goetz, Nancy H. (1990) BS, U. of Wisconsin, Madison, 1978; MA, MFA, U. of New Mexico, 1988, 1990.

Haltern, Hagen G. (1978) BFA, Fachhochschule, Cologne, West Germany, 1972; MFA, Kunstakademie, Düsseldorf, Germany, 1976.

Himes, Hal Douglas (1988) BA, MFA, Brigham Young U., 1983, 1987.

Johnson, Mark J. (1987) BA, Brigham Young U., 1979; MA, U. of Illinois, 1983; MFA, PhD, Princeton U., 1984, 1986.

Peacock, Martha M. (1987) BA, Brigham Young U., 1978; MA, PhD, Ohio State U., 1985, 1989.

Instructor

Moss, LaVelle R. (1987) BS, U. of Utah, 1964; MA, Brigham Young U., 1969.

Emeriti

Alder, Lorna C. (1960) BS, Brigham Young U., 1935; MA, Columbia U., 1940.

Allen, Murray F. (1969) BS, U. of Utah, 1947; MA, Brigham Young U., 1968.

Andrus, J. Roman (1943) BS, MS, Brigham Young U., 1942, 1943; PhD, U. of Colorado, 1958.

Breinhold, Floyd E. (1961) BS, MEd, Brigham Young U., 1937, 1953.

Burnside, Wesley M. (1958) BS, MS, Brigham Young U., 1941, 1949; PhD, Ohio State U., 1970.

Darais, Alexander B. (1954) BS, Brigham Young U., 1948; MFA, Claremont Graduate School, 1952.

Gunn, Richard L. (1948) BS, MS, Brigham Young U., 1947, 1950; EdD, Stanford U., 1955.

Johansen, Franz M. (1956) BA, MA, Brigham Young U., 1955, 1960.

Magleby, Francis R. (1959) BS, MS, Brigham Young U., 1950, 1951; EdD, Columbia U., 1967.

Raty, Thomas Laine (1963) BS, MS, Brigham Young U., 1950, 1961; EdD, Arizona State U., 1985.

Takasaki, Fred Y. (1961) BA, MA, Brigham Young U., 1953, 1958; MA, U. of Michigan, 1968.

Tippetts, Frank M. (1958) BA, MA, Brigham Young U., 1953, 1962; EdD, Arizona State U., 1968.

Turner, Glen H. (1947) BS, MA, Brigham Young U., 1940, 1948.

Weaver, Max D. (1961) BS, MA, Utah State U., 1949, 1955.

Wilson, Warren B. (1954) BS, Utah State U., 1943; MFA, U. of Iowa, 1949.

Programs and Degrees

BA	Honors in Art History and University Honors
BFA	Honors in Art and University Honors

Art Education

BA	Art Education
MA	Art Education

Art History

BA	Art History
MA	Art History

Art Studio

BA	Art
BFA	Art
Emphases:	
	Ceramics
	Painting
	Printmaking
	Sculpture
MFA	Studio Art
Emphases:	
	Ceramics
	Painting-Drawing
	Printmaking-Drawing
	Sculpture

The Department of Art serves four main purposes: (1) preparing competent professionals in various fields of the plastic and graphic arts; (2) training historians who can critically appraise works of art; (3) preparing art educators for teaching the visual arts at the elementary, secondary, and higher education levels; and (4) generally developing the aesthetic sense of individuals by helping them experience art.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

Art Education Area

BA Art Education

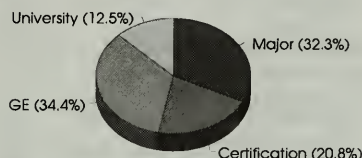
(Composite Teaching Major)

This is a composite art teacher preparation program designed for K–12 certification.

- I. First-year foundation: Art 114, 115, 116, 120.
- II. Second-year foundation: Art 214, 215, 216, 217.
- III. Art 349R, 354R, Des 270 or photography equivalent.
- IV. Art history: Art 201, 202, 300, 316; one 300-level elective.
- V. Supporting courses: FamSc 210; ScEd 276R, 351, 376R, 476R (12 hours only); Soc 326; Hlth 362; Phil 214; IS 286.
- VI. Certification requirements: Art 324, 377, 397, 439, 476, 478.

VII. No D credit in art can be applied toward a degree in the department.

Summary of Degree Requirements for BA Art Education



1. Total hours 139.5
2. Major hours ♦ 45.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 48.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 15.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Art Education Minor

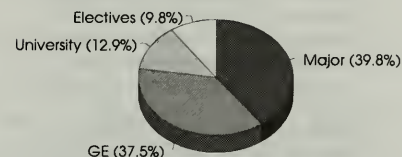
This minor is for students from majors outside art education: Two courses from Art 114, 115, 116; 120; 214 or 215; 216 or 217; 310, 324; 349 or 354; 377, 397, 439, 478.

Art History Area

BA Art History

- I. Art 211, 212, 300; 301 or 302 or 303; 304 or 318 or 319; 306 or 307 or 313 or 314; 309 or 315 or 317; 316 or 311 or 312; 495R.
- II. Three courses from Art 210, 400R, 415R, or any upper-division core course not already taken.
- III. Art 200.
- IV. Language requirement: Either German, Italian, or French through 201 level.
- V. Cognate field: Three 3-hour courses from approved list.
- VI. No D credit in art can be applied toward a degree in the department.

Summary of Degree Requirements for BA Art History



1. Total hours 128.0
2. Major hours ♦ 51.0
3. General Education requirements 48.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 0–15.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 12.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in Art History and University Honors

The art history Honors major is designed to enhance and expand researching, writing, and critical thinking skills by contributing more depth and breadth to the art history major's academic experience.

- I. Honors Program requirements: Completion of the University Honors graduation requirements. This requires a minimum of six Honors classes to include: Western Civilization 1 and 2 (HonP 201, 202), Advanced Writing (HonP 200 or Phil 115), and three Honors seminars.
- II. Departmental graduation requirements for art history.
- III. Honors in art history requirements (see department for further details):
 - A. Complete Honors major reading list (see department for details). This includes literary as well as visual monuments from the history of Western art and culture. The monuments and related readings will correspond with the major periods in Western art history as covered in 300-level art history lecture classes. (This is a separate but complimentary list to that required by the Honors Program.)

- B. Write a major research paper for each 300- and 400-level course on a topic approved by the instructor. These papers are to be kept by the student and presented as a portfolio prior to graduation. The purpose of the portfolio is to demonstrate, by way of a collection of term papers, the student's growth as an art historian and his or her progress in researching and writing in the field of art history.
- C. Seek additional consultation in each upper-level course to discuss readings and research from the Honors reading list pertaining to course of study and required research paper.
- D. Write an Honors thesis (Art 449R, 3 hours). The Honors thesis will demonstrate original research and writing that may be an extension of one of the research papers. An oral discussion centered around the thesis will be held prior to graduation with selected members of the Honors faculty.

Art History Minor

This minor is for students from majors outside art history: Complete Art 211, 212 and 9 hours of art history courses (Art 300 or above).

Art Studio Area

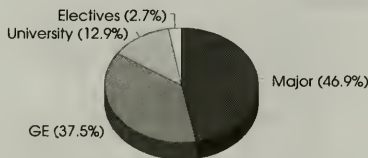
Core Requirements for All Undergraduate Degree Programs in Art Studio

- I. First year: Art 114, 115, 116, 117, 118, 119, 120, 121.
- II. Second year: Art 214, 215, 216, 217, 218, 219, 220, 221.
- III. Art history: Art 211, 212, 310 or 312, and 3 elective hours from 300-level art history courses.
- IV. Art criticism: Art 397.
- V. No D credit in art can be applied toward a degree in the department.

BA Art

Required in addition to above core: Art 321R or 322R; 327R, 333R; 350R or 351R; 356R or 358R; 359R; 6 elective hours in art.

Summary of Degree Requirements for BA Art



1. Total hours 128.0
2. Major hours 60.0
3. General Education requirements 48.0
- Core 15.0

- | | |
|--|------|
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 15.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 3.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

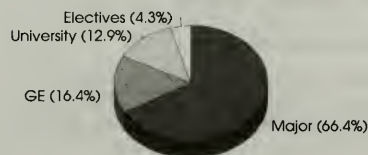
BFA Art

The BFA is a professional degree. An area of emphasis is selected from ceramics, painting, printmaking, and sculpture.

Required in addition to above core: Art 398, 540; 42 hours from 300- and 400-level studio course work, of which 30 hours must be in the area of emphasis, including the BFA final project, Art 497R.

Students can certify to teach K-12. For a description of requirements see supporting courses and certification requirements as outlined under the preceding BA Art Education section of this catalog.

Summary of Degree Requirements for BFA Art



1. Total hours 128.0
2. Major hours 85.0
3. General Education requirements 21.0
- Core 15.0
- First-Year Writing 3.0
- Arts and Sciences electives 0.0
- Advanced Math/Foreign Language 0.0
- Advanced Writing 3.0
4. University requirements 16.5
- Religion 14.0
- PE/Health 2.5
5. Elective hours 5.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
- 13 hours per semester 10.0
- 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer

credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BFA with Honors in Studio Art and University Honors

Students intending to pursue an Honors major in art should follow normal departmental procedures for acceptance into the Honors Program.

I. Honors Program requirements: Completion of the University Honors graduation requirements.

Note: 9 of these hours must be filled by HonP 200, 201, 202, 259; 260 (or Biol 100H); AHtg 100 or HonP 240; and two Honors electives, including at least one course in the Social and Behavioral Sciences.

II. Honors major requirements:

- A. Course requirements: Art Studio core requirements for BFA, Honors sections of Art 211, 212, 310, 397, 398 and 41 hours in major specialty.
- B. Exhibition and paper requirement: Public exhibition and accompanying paper (Art 499R, 3 hours); option of presenting student shows in the gallery on the lower floor of the Maeser Building.

Minor

A minor in art is offered through successful completion of all first-year art foundation courses (Art 114-121) and 6 hours from second-year art foundation courses (Art 214-221) or corresponding nonmajor courses, and 3 hours of art history or art criticism.

Art Education Minor

Please see the College of Fine Arts Advisement Center.

Art (Art)

Undergraduate Courses

100. Introduction to Art. (1:1:0)

Basic form, content, and art processes through lectures, demonstrations, and studio and gallery visits.

Note: Art 103 through 111 are for nonart majors.

103. Introduction to Drawing. (2:1:3)

Basic drawing techniques and concepts. Fee.

104. Introduction to Sculpture. (2:1:3)

Basic sculpture processes, including clay modeling and stone carving. Fee.

105. Introduction to Ceramics. (2:1:3)

Basic methods and processes of forming and glazing original ceramic objects. Fee.

- 106. Introduction to Printmaking.** (2:1:3)
Basic techniques in etching and woodcut. Fee.
- 107. Introduction to Oil Painting.** (2:1:3)
Basic concepts and techniques of oil painting. Fee.
- 108. Introduction to Watercolor.** (2:1:3)
Basic concepts and techniques of watercolor. Fee.
- 109. Introduction to Calligraphy.** (2:1:3)
Independent Study also.
Basic skills in handlettering.
- 111. Introduction to Art History.** (3:3:0)
Honors also.
Topical approach to art history and appreciation.
- Note: Art 114 through 121 are for art majors and will be designated Foundation 1 for prerequisite information.**
- 114. Drawing: Aesthetic Structure.** (1.5:1:2)
Foundation drawing. Fee.
- 115. Drawing: Spatial.** (1.5:1:2)
Foundation drawing. Fee.
- 116. Drawing: Value.** (1.5:1:2)
Foundation drawing. Fee.
- 117. Drawing: Observational.** (1.5:1:2)
Foundation drawing. Fee.
- 118. Anatomy.** (1.5:1:2)
Foundation figure study. Fee.
- 119. Three Dimensions.** (1.5:1:2)
Foundation 3-D study. Fee.
- 120. Color.** (1.5:1:2)
Foundation color study. Fee.
- 121. Foundation Readings.** (1.5:1:2)
Significant writings on art.
- 200. Studio Techniques for Art History.** (3:3:0)
Introduction to art techniques, materials, and practices directed toward art history majors.
- 201. World Civilization to 1500.** (3:3:0)
Survey of Western civilization emphasizing the visual arts from ancient Greece to the Gothic period.
- 202. World Civilization Since 1500.** (3:3:0)
Survey of Western civilization; emphasizing the visual arts from the Renaissance to the twentieth century.
- 203R. Drawing 2.** (2:1:3 ea.) Prerequisite: Art 103.
Extended work in basic drawing techniques. Fee.
- 204R. Sculpture 2.** (2:1:3 ea.) Prerequisite: Art 104.
Extended work in sculpture processes, including modeling and carving. Fee.
- 205R. Ceramics 2.** (2:1:3 ea.) Prerequisite: Art 105.
Extended methods of creating original ceramic objects, including glaze mixing, kiln firing, and research techniques. Fee.
- 206R. Printmaking 2.** (2:1:3 ea.) Prerequisite: Art 106.
Extended work in silkscreen, etching, and woodcut. Fee.
- 207R. Painting 2.** (2:1:3 ea.) Prerequisite: Art 107.
Continuation from Art 107. Fee.
- 208R. Watercolor 2.** (2:1:3 ea.) Prerequisite: Art 108.
Continuation from Art 108. Fee.
- 209. Calligraphy 2.** (2:1:3) Prerequisite: Art 109.
Spencerian alphabet and design. Problems in applying various handmade and transfer alphabets.
- 210. Survey of Western Architecture.** (3:3:0)
Evolutionary development of Western architecture from Greek through contemporary trends.
- 211. Survey of Western Art 1.** (3:3:0)
Independent Study also.
Art and architecture of the Western world from Primitive through medieval.
- 212. Survey of Western Art 2.** (3:3:0)
Independent Study also.
Art and architecture of the Western world from Renaissance to contemporary.
- 213. Survey of Oriental Art.** (3:3:0)
Major periods and dynasties of the Orient from ancient to modern times.
- Note: Art 214 through 221 are for art majors and will be designated Foundation 2 for prerequisite information.**
- 214. Aqueous Media Fundamentals.** (1.5:1:2)
Prerequisite: Foundation 1.
Foundation in aqueous media. Fee.
- 215. Painting Fundamentals.** (1.5:1:2)
Prerequisite: Foundation 1.
Foundation painting. Fee.
- 216. Ceramics Fundamentals.** (1.5:1:2)
Prerequisite: Foundation 1.
Foundation ceramics. Fee.
- 217. Sculpture Fundamentals.** (1.5:1:2)
Prerequisite: Foundation 1.
Foundation sculpture. Fee.
- 218. Intaglio Fundamentals.** (1.5:1:2)
Prerequisite: Foundation 1.
Foundation printmaking. Fee.
- 219. Lithography Fundamentals.** (1.5:1:2)
Prerequisite: Foundation 1.
Foundation printmaking. Fee.
- 220. Drawing Fundamentals.** (1.5:1:2)
Prerequisite: Foundation 1.
Foundation drawing. Fee.
- 221. Figure Drawing Fundamentals.** (1.5:1:2)
Prerequisite: Foundation 1.
Foundation figure drawing.
- 230R. Bookbinding.** (3:3:0 ea.)
Traditional approaches to hand bookbinding.
- 300. Art Historical Methodology, Research, and Intensive Writing.** (3:3:0) Prerequisite: Art 211, 212.
Necessary skills to research and write in the field of art history.
- 301. Art of Egypt and Mesopotamia.** (3:3:0)
Prerequisite: Art 211 or instructor's consent.
Social, political, and religious conditions that produced and found expression in the art of Egypt and Mesopotamia.
- 302. Greek Art.** (3:3:0) Prerequisite: Art 211 or instructor's consent.
History and appreciation of Greek art, with consideration of the formative cultures.
- 303. Roman Art.** (3:3:0) Prerequisite: Art 211 or instructor's consent.
Art and architecture of the Etruscans and Romans.
- 304. Early Christian and Byzantine Art.** (3:3:0) Prerequisite: Art 211 or instructor's consent.
Survey of Christian art in the Roman and Byzantine Empire from ca. 200 to 1453.
- 305. English Architecture, 1485–1900.** (3:3:0)
English architecture from the Tudor through the Victorian period.
- 306. Italian Renaissance Art.** (3:3:0)
Prerequisite: Art 212 or instructor's consent.
Major artists, monuments, and influences of the Renaissance.
- 307. Northern Renaissance.** (3:3:0)
Prerequisite: Art 212 or instructor's consent.
Fifteenth- and sixteenth-century art in northern Europe.
- 309. Nineteenth-Century European Art.** (3:3:0) Independent Study also. Prerequisite: Art 212 or instructor's consent.
Nineteenth-century art in Europe.
- 311. Modern Architecture.** (3:3:0)
Prerequisite: Art 212 or instructor's consent.
Critical review of the roots and evolution of modern architecture.
- 312. Contemporary Art.** (3:3:0) Prerequisite: Art 212 or instructor's consent.
Critical evaluation of trends in art since 1945.
- 313. Northern Baroque Art.** (3:3:0)
Prerequisite: Art 212 or instructor's consent.
Baroque painting in Flanders and Holland.
- 314. Southern Baroque Art.** (3:3:0)
Prerequisite: Art 212 or instructor's consent.
History of baroque painting, sculpture, and architecture in Italy, Spain, and France.

315. American Architecture and City Planning. (3:3:0) Prerequisite: Art 212 or instructor's consent.

Critical evaluation of American architecture and city planning, emphasizing sources such as Europe.

316. Modern Art. (3:3:0) Independent Study also. Prerequisite: Art 212 or instructor's consent.

Modern European art and theory, 1900–1945.

317. American Art. (3:3:0) Prerequisite: Art 212 or instructor's consent.

American painting and sculpture from colonial through modern times.

318. Early Medieval and Islamic Art. (3:3:0) Prerequisite: Art 211 or instructor's consent.

Art and architecture of Western Europe and Islam from A.D. 500 to 1050.

319. Romanesque/Gothic Art and Architecture. (3:3:0) Prerequisite: Art 211 or instructor's consent.

Major monuments in architecture, sculpture, and painting from the Romanesque and Gothic periods.

321R. Drawing. (3:1:5 ea.) Prerequisite: Foundation 1, Art 220.

Drawing as a graphic form of self-expression, emphasizing personal statement in response to various experiences and concepts. Fee.

322R. Figure Drawing. (3:1:5 ea.) Prerequisite: Foundation 1, Art 221.

Drawing from the human figure, emphasizing structure and anatomy. Fee.

323. Japanese Art. (3:3:0)

History and appreciation of Japanese art and architecture.

324. Foundations in Art Education. (3:3:0) Prerequisite: ScEd 276R.

Theoretical, philosophical, and historical foundations of art education; children's aesthetic development.

326. Art for Elementary Teachers. (4:2:4)

Children's conceptual and expressive development in art. A balanced program emphasizing content from the art disciplines: (1) studio production, (2) art criticism, (3) art history, and (4) aesthetics.

327R. Painting. (3:3:3 ea.) Prerequisite: Foundation 1, Art 215.

Fundamental concepts and techniques of oil painting. Fee.

328R. Figure Painting. (3:2:4 ea.)

Prerequisite: Foundation 1, Art 215, 322, 327.

Fundamentals of figure painting. Fee.

333R. Aqueous Media. (3:2:4 ea.)

Prerequisite: Foundation 1, Art 214.

Aqueous media on paper, emphasizing use of transparent watercolor. Fee.

339. Graphic Design for Secondary Schools. (3:0:6)

Methods for teaching graphic design, emphasizing handmade graphics, layouts and designs, and the history of the alphabet.

340R. Letterpress. (3:3:0 ea.)

Fundamentals of handprinting, typography, and design using traditional letterpress techniques.

349R. Printmaking: Relief/Screen. (3:2:4 ea.)

Prerequisite: Foundation 1.

Relief and screen printmaking materials and procedures. Fee.

350R. Printmaking: Intaglio. (3:2:4 ea.)

Prerequisite: Foundation 1, Art 218.

Intaglio printmaking, based on traditional and contemporary techniques. Fee.

351R. Printmaking: Lithography. (3:2:4 ea.)

Prerequisite: Foundation 1, Art 219.

Lithography printmaking, based on traditional and contemporary techniques. Fee.

353R. Computer Art. (3:2:4 ea.) Prerequisite: instructor's consent.

Exploration of the computer as a tool for visual self-expression.

354R. Craft Processes. (3:1:5 ea.) Prerequisite: Foundation 1.

Exploration in crafts using a variety of materials. Fee.

355R. Stained Glass. (3:2:4 ea.)

Methods and processes using leaded glass, copper, foil, and faceted glass. Fee.

356R. Figure Sculpture. (3:1:5 ea.)

Prerequisite: Foundation 1, Art 217, 221.

Modeling the human figure in clay. Fee.

358R. Sculpture. (3:1:5 ea.) Prerequisite:

Foundation 1, Art 217, 220.

Traditional and nontraditional approaches to sculpture. Fee.

359R. Ceramics. (3:2:4 ea.) Prerequisite:

Foundation 1, Art 216, 217.

Designing, throwing, hand forming, decorating, glazing, and firing techniques. Fee.

377. Methods of Instruction and Art Room Management. (3:3:0) Prerequisite: ScEd 276R, Art 324.

Methods of instruction for art education; principles and practices of art room management.

390. Color. (2:2:0) Prerequisite: Art 120.

Analysis of color theories, including intuitive and structured application. Fee.

395R. BFA Seminar. (1:1:0) Prerequisite: acceptance into BFA program.

Clarifying traditional and contemporary concepts of art; examining their pertinence to the needs of LDS artists; familiarity with contemporary artists and their work; developing personal directions and attitudes; written explications clarifying individual philosophies and their relationship to established concepts in the field.

397. Introduction to Art Criticism. (3:3:0)

Theoretical foundations for critical judgment in art and their application in judging works of art.

398. Readings. (2:2:0) Prerequisite: Art 121.

Directed readings in significant issues and ideas in the visual arts.

399R. Cooperative Education Internship. (1–8:0:0 ea.)

On-the-job experience. Project approval required before registration.

400R. Individual Study in Art History. (1–3:Arr.:Arr. ea.) Prerequisite: Art 211, 212, 300.

415R. Special Topics and Readings in Art History. (3:3:0 ea.)

Topics of specific student interest, centered on strengths of visiting faculty, BYU Study Abroad Program, or other significant art history projects.

421R. Drawing Studio. (1–9:Arr.:Arr. ea.) Prerequisite: Art 321R or 322R; admission by portfolio.

Developing individual expressive strengths in drawing. Fee.

422R. Figure Drawing Studio. (1–9:Arr.:Arr. ea.) Prerequisite: Art 322R; admission by portfolio.

Developing individual drawing skill related to the human figure. Fee.

423R. Intensive Studio. (1–10:Arr.:Arr. ea.)

Prerequisite: Foundations 1, 2; instructor's consent; portfolio review.

Selective, individual study. Fee.

425. Art for Special Education. (4:2:4) F

Theory and philosophy in art education applied to needs of exceptional children.

427R. Painting Studio. (1–9:Arr.:Arr. ea.)

Prerequisite: Art 327R; admission by portfolio.

Developing individual concepts and techniques in painting. Fee.

428R. Figure Painting Studio. (1–9:Arr.:Arr. ea.)

Prerequisite: Art 322R, 327R, 328R; admission by portfolio.

Advanced figure study. Fee.

439. Aesthetics for Art Educators. (3:3:0)

Recommended: Phil 214.

Theoretical foundations and practical applications for teaching aesthetics.

450R. Intaglio Studio. (1-9:Arr.:Arr. ea.)

Prerequisite: Art 350R; admission by portfolio.

Advanced work in intaglio, monotype, relief. Fee.

451R. Lithography Studio. (1-9:Arr.:Arr. ea.)

Prerequisite: Art 350R, 351R; admission by portfolio.

Advanced work in lithography. Fee.

456R. Sculpture Studio. (1-9:Arr.:Arr. ea.)

Prerequisite: Art 356R or 358R; admission by portfolio.

Advanced study in sculpture: traditional and nontraditional approaches. Fee.

459R. Ceramic Studio. (1-9:Arr.:Arr. ea.)

Prerequisite: Art 359R; admission by portfolio.

Exploratory experience with advanced methods in ceramics. Research emphasis on clay bodies, glazes, and constructing and operating kilns. Fee.

476. Art Student Teaching Seminar. (3:3:0)

Prerequisite: concurrent registration in ScEd 476R for 12 hours.

Analysis and discussion of art student teaching experience; instruction in educational leadership and professional responsibilities of art educators.

478. Art Curriculum Development,**Implementation, and Evaluation.** (3:3:0)

Prerequisite: Art 324, ScEd 276R.

Principles for developing balanced art curriculum; curriculum implementation and evaluation of student progress and art program effectiveness.

494R. Special Problems in Art. (1-3:0:0 ea.)

Prerequisite: instructor's consent. Fee.

495R. Art History Seminar. (3:3:0 ea.)

Prerequisite: Art 211, 212, 300.

Restrictive topic in a selected area of art history.

497R. BFA Final Project. (3:0:0 ea.)**499R. Honors Thesis.** (1-6:0:0 ea.)

Advanced Undergraduate or Graduate Courses

501. Art of Egypt and Mesopotamia. (3:3:1)

Prerequisite: Art 211, 212, 500.

Social, political, and religious conditions that produced and found expression in the art of Egypt and Mesopotamia.

502. Greek Art. (3:3:1) Prerequisite: Art 211, 212, 500.

Consideration of formative cultures.

503. Roman Art. (3:3:1) Prerequisite: Art 211, 212, 500.

Art and architecture of the Etruscans and Romans.

504. Early Christian and Byzantine Art. (3:3:1)

Survey of Christian art in the Roman and Byzantine Empire from ca. 200 to 1453.

506. Italian Renaissance Art. (3:3:1)

Prerequisite: Art 211, 212, 500.

Major artists, monuments, and influences of the Renaissance.

507. Northern Renaissance Art. (3:3:1)

Prerequisite: Art 211, 212, 500.

Fifteenth- and sixteenth-century art in northern Europe.

509. Nineteenth-Century European Art. (3:3:1) Prerequisite: Art 211, 212, 500.

Nineteenth-century art in Europe.

510. Western Architecture. (3:3:0)

Critical evaluation of major movements in Western architecture.

511. Modern Architecture. (3:3:0)

Critical review of the roots and evolution of modern architecture.

512. Contemporary Art. (3:3:1) Prerequisite: Art 211, 212, 500.

Critical evaluation of trends in art since 1945.

513. Northern Baroque Art. (3:3:1)

Prerequisite: Art 211, 212, 500.

Baroque painting in Flanders and Holland.

514. Southern Baroque Art. (3:3:1)

Prerequisite: Art 211, 212, 500.

History of baroque painting, sculpture, and architecture in Italy, Spain, and France.

515. American Architecture and City

Planning. (3:3:1) Prerequisite: Art 211, 212, 500.

Critical evaluation of American architecture and city planning; emphasizes sources.

516. Modern Art. (3:3:1) Prerequisite: Art 211, 212, 500.

Modern European art and theory, 1900-1945.

517. American Art. (3:3:1) Prerequisite: Art 211, 212, 500.

American painting and sculpture from colonial through modern times.

518. Early Medieval and Islamic Art. (3:3:1)

Prerequisite: Art 211, 212, 500.

Art and architecture of Western Europe and Islamic lands from A.D. 500 to 1050.

519. Romanesque/Gothic Art and

Architecture. (3:3:1) Prerequisite: Art 211, 212, 500.

Major monuments in architecture, sculpture, and painting from the Romanesque and Gothic periods.

520. Museology 1. (3:3:0) Prerequisite: Art 211, 212.

Theoretical and administrative aspects of museum work.

521. Museology 2. (3:3:0) Prerequisite: Art 211, 212, 520.

Functional aspects of museum work.

530. Teaching Art History in the Public Schools. (3:3:0)

Conceptual methodology of teaching art history in the public schools.

540. Business Practices for Artists. (2:2:0)**578R. Art Education Studio.** (3:0:6 ea.)

MA courses in ceramics, drawing, figure drawing, oil painting, aqueous painting, printmaking, crafts, sculpture. Fee.

595R. Seminar. (1:0:0 ea.)

Student and faculty analysis of curriculum relationships, projection of student objectives, contemporary topics, and visits to current exhibits.

598R. Readings. (1-3:2:0 ea.)

Graduate readings in the visual arts.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

600R. Individual Study in Art History.

(1-8:Arr.:Arr. ea.)

621R. Graduate Drawing Studio. (1-8:8:8

ea.)

622R. Graduate Figure Drawing Studio.

(1-8:8:8 ea.)

627R. Graduate Painting Studio.

(1-8:Arr.:Arr. ea.)

650R. Graduate Printmaking Studio.

(1-8:Arr.:Arr. ea.)

656R. Graduate Sculpture Studio.

(1-8:Arr.:Arr. ea.)

659R. Graduate Ceramics Studio.

(1-8:Arr.:Arr. ea.)

677R. Research in Art Education. (3:3:0 ea.)**678R. Issues and Trends in Art Education.** (3:3:0 ea.)**679R. Special Problems in Art Education.** (3:3:0 ea.)**695R. Art History Seminar.** (3:3:0 ea.)**697R. MFA Project.** (1-6:Arr.:Arr. ea.)**698R. MA Curriculum Project.** (1-6:Arr.:Arr. ea.)**699R. Master's Thesis.** (1-6:Arr.:Arr. ea.)

Asian and Near Eastern Languages

Van C. Gessel, Chair (4052 JKHB)

Professor

Kim, Han Kon (1990) BA, Seoul National U., Korea, 1956; MA, Chonnam National U., Korea, 1960; MA, U. of Hawaii, 1966; PhD, Seoul National U., Korea, 1975.

Associate Professors

- Gessel, Van C. (1990) BA, U. of Utah, 1973; MA, PhD, Columbia U., 1975, 1979.
 Parkinson, Dilworth B. (1980) BA, Brigham Young U., 1975; MA, PhD, U. of Michigan, 1976, 1982.
 Ricks, Stephen David (1981) BA, MA, Brigham Young U., 1974, 1976; PhD, U. of California, Berkeley, and Graduate Theological Union, 1982.
 Russell, Robert A. (1982) BA, U. of Utah, 1968; PhD, Harvard U., 1977.
 Watabe, Masakazu (1977) BA, MA, Brigham Young U., 1972, 1973; PhD, U. of Southern California, 1978.
 Williams, Gary S. (1966) BA, Brigham Young U., 1962; PhD, U. of Washington, 1973.

Assistant Professors

- Beaman, Bruce W. (1970) BA, Brigham Young U., 1959; MA, Indiana U., Bloomington, 1969.
 Belnap, R. Kirk (1990) BA, MA, Brigham Young U., 1983, 1986; PhD, U. of Pennsylvania, 1991.
 Bourgerie, Dana S. (1991) BA, U. of Minnesota, 1982; MA, PhD, Ohio State U., 1987, 1990.
 Honey, David B. (1987) BA, U. of California, Los Angeles, 1980; MA, PhD, U. of California, Berkeley, 1984, 1988.
 Perkins, George W. (1975) BA, Brigham Young U., 1962; MA, PhD, Stanford U., 1967, 1977.
 Peterson, Daniel C. (1986) BA, Brigham Young U., 1977; PhD, U. of California, Los Angeles, 1990.
 Peterson, Mark A. (1983) BA, Brigham Young U., 1971; MA, PhD, Harvard U., 1973, 1987.

Visiting Assistant Professor

- Parry, Donald W. (1992) BA, MA, Brigham Young U., 1985, 1986; PhD, U. of Utah, 1992.

Instructor

- Tang, Yanfang (1992) BA, Hebei Teachers' C.; MA, Ohio State U., 1988.

Assistant Lecturers

- Pack, Melvin Deloy (1974) BS, U. of California, Los Angeles, 1965; MA, Brigham Young U., 1973; PhD, U. of Pennsylvania, 1981.
 Rhee, Honam (1987) BA, Hankuk U. of Foreign Studies, Korea, 1959; MA, Yonsei U., Korea, 1977.

Programs and Degrees

- BA Chinese
 BA Chinese Teaching
 BA Japanese
 BA Japanese Teaching
 BA Korean
 MA Language Acquisition (Arabic, Chinese, Japanese, or Korean)

The Department of Asian and Near Eastern Languages offers the bachelor of arts degree in Chinese, Japanese, and Korean.

Instruction is regularly available in the following languages:

Chinese (Mandarin)	Hebrew
Japanese	Arabic
Korean	Thai

Language Credit by Examination

Credit by examination is available for many lower-division courses of the above-listed languages. Enrollment in an advanced class is prerequisite to taking the examination.

The following languages are *not* taught on a regular basis but may be offered if sufficient demand exists. Credit by examination is available for some of the languages listed below.

Asian Languages

Cantonese
 Hindi
 Vietnamese

Near Eastern Languages

Akkadian
 Aramaic
 Egyptian
 Persian (Farsi)
 Syriac
 Turkish
 Ugaritic

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

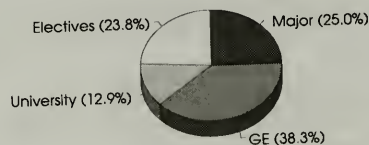
No D credit in major or minor courses is accepted.

Chinese

BA Chinese

- I. Chin 202, 301, 321, 322, 325 or 326, 343 or 344, 495, plus any three of 441, 442, 443, 444.
- II. Complete 6 more hours of upper-division Chinese.
- III. No formal minor is required, but it is mandatory that students counsel with their advisor early in their program to determine supporting courses appropriate to their professional goals.

Summary of Degree Requirements for BA Chinese



1. Total Hours	128.0
2. Major hours ♦	32.0
3. General Education requirements	49.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0

Advanced Math/Foreign Language	0-16.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	30.5

6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate

13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Chinese Minor

Chin 301, 321 or 322, 343 or 344, 441, 443, and one additional class above 301.

Chinese Teaching Major and Minor

See Chinese in the Secondary Education section of this catalog.

Chinese—Mandarin (Chin)

Undergraduate Courses

100A. Beginning Mandarin, Slow Paced. (2:2:1)

Easy conversation and vocabulary building.

100B. Beginning Mandarin, Slow Paced. (2:2:1) Prerequisite: Chin 100A.

Writing system, vocabulary, and easy conversation and composition. Chin 100A and B together are equivalent of 101.

101. First-Year Mandarin. (4:5:2)

Basic grammar, vocabulary building, speaking.

102. First-Year Mandarin. (4:5:2)

Prerequisite: Chin 101 or equivalent. Continuation of Chin 101.

200. Chinese Calligraphy. (1:1:0)

Prerequisite: Chin 101 or equivalent. Training in the art of writing Chinese characters with a brush.

201. Second-Year Mandarin. (4:5:1)

Prerequisite: Chin 102. Advanced grammar, the writing system, reading and writing, speaking.

202. Second-Year Mandarin. (4:5:1)

Prerequisite: Chin 201. Advanced grammar, the writing system, reading and writing, speaking.

211R. Second-Year Conversation. (2:2:1 ea.)

Prerequisite: Chin 102. Emphasis on fluency and vocabulary building.

301. Third-Year Mandarin. (4:5:1)

Prerequisite: Chin 202.

Discourse grammar, advanced reading.

311R. Third-Year Conversation. (2:2:1 ea.)

Prerequisite: Chin 202 or equivalent.

Emphasis on sophistication of speech.

321, 322. Selected Readings of Modern Chinese. (4:5:0 ea.) Prerequisite: Chin 301.

Complements overall language competency through reading modern texts selected from a wide range of styles and genres.

325. Structure of Chinese. (3:3:0)

Prerequisite: Chin 202.

Sound, syntax, meaning, and word structure of Mandarin Chinese and its implications to problems of learning Chinese in speaking, reading, and writing.

326. Introduction to Chinese Linguistics. (3:3:0) Prerequisite: Chin 202.

Dialectology, phonology, syntax, semantics, discourse, morphology, and socio-linguistics.

327. Chinese Translation and Interpretation. (3:3:0) Prerequisite: Chin 301.

Translation techniques, with practice in oral and written translation either from Chinese to English or from English to Chinese.

343. Chinese Literature in Translation—Poetry. (3:3:0)

All readings in English.

344. Chinese Literature in Translation—Prose. (3:3:0)

Topics vary.

345. Chinese Culture. (3:3:0)

Introduction to the institutions, culture, philosophy, and fine arts of China. All texts read in English.

347. Business Chinese. (3:3:0) Prerequisite: Chin 301 or instructor's consent.

Introduction to terminology and format of business writing in Chinese, emphasizing both reading and writing of various forms of business communication.

377. Chinese Language Teaching Procedures. (3:3:0) Prerequisite: Chin 325 or 326 or instructor's consent.

Acquiring knowledge and skills specific to teaching Chinese as a foreign language. Conducted in Chinese and English.

399R. Cooperative Education: Internship. (1–9:0:0 ea.) Prerequisite: Chin 202.

On-the-job cultural and/or language experience.

441, 442. Classical and Literary Chinese. (3:3:0 ea.) Prerequisite: Chin 301 or equivalent.

Introduction to syntax and stylistic patterns.

443. Modern Chinese Literature. (3:3:0)

Prerequisite: Chin 321 or 322.

Authors, themes, and writing styles of the period 1915–1949.

444. Contemporary Chinese Literature. (3:3:0) Prerequisite: Chin 321 or 322.

Contemporary literature of Taiwan and the PRC. Texts in Chinese.

490R. Individual Study in Chinese. (1–3:Arr.:0 ea.) Prerequisite: project approval by instructor.

Assignments to fit individual needs of the advanced student.

495. Senior Seminar for Majors. (2:2:0)

Prerequisite: advanced knowledge of Chinese.

Research methods in Chinese language sources. Paper required.

Advanced Undergraduate or Graduate Course**599R. Cooperative Education: Internship.** (1–9:0:0 ea.) Prerequisite: Chin 301.

On-the-job cultural and/or language experience.

Graduate Degree Courses

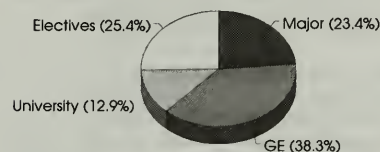
See also the 1993–94 BYU Graduate Studies Catalog.

670R. Tutorial Internship in Chinese. (1–3:0:0 ea.)**680R. Special Studies in Chinese.** (1–3:0:0 ea.)**690R. Seminar in Chinese.** (1–3:0:0 ea.)**699R. Master's Thesis.** (1–6:0:0 ea.)**Japanese****BA Japanese**

I. Japan 202, 301, 311R, 321, 322, 325 or 326, 441, 443, 444.

II. Electives: 9 hours from Japan 325, 326, 343, 344, 345, 353, 377; Hist 345 or 346.

III. No formal minor is required, but it is mandatory that students counsel with their advisor early in their program to determine supporting courses appropriate to their professional goals. It is recommended that students complete Engl 311 or similar courses before enrolling in advanced literature courses.

IV. Students will be required to sit a comprehensive language examination covering grammar and *joyo kanji*. Majors must also complete a required reading list before graduation.**Summary of Degree Requirements for BA Japanese**

1. Total hours	128.0
2. Major hours [★]	30.0
3. General Education requirements	49.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0–16.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	32.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

[★]Note: Hours do not include any course that could be used to fill GE or university requirements.**Japanese Minor**

Complete 16 hours beyond Japan 201 as follows: 202, 301, 311, 321, 322.

Japanese Teaching Major and Minor

See Japanese in the Secondary Education section of this catalog.

Japanese (Japan)**Undergraduate Courses****100A. Beginning Japanese, Slow Paced 1.** (3:3:1)

Writing system, grammar, and vocabulary. Easy conversation and composition.

100B. Beginning Japanese, Slow Paced 2. (3:3:1) Prerequisite: Japan 100A.

Continuation of Japan 100A.

101, 102. First-Year Japanese. (4:5:1 ea.)

Prerequisite: for 102, Japan 101, 100B, or equivalent.

Writing systems, grammar and vocabulary-building fundamentals, and easy conversation and composition.

201. Second-Year Japanese. (4:5:2)
Prerequisite: Japan 102 or equivalent.

Further practice in conversation; basic reading and writing skills, including introduction to Chinese characters.

202. Second-Year Japanese. (4:5:0)
Prerequisite: Japan 201 or equivalent.

Reading and writing emphasizing essential characters, vocabulary, and grammatical principles.

211R. Second-Year Conversation. (1-3:Arr.:0 ea.) Prerequisite: Japan 102 or equivalent. For Japan Study Abroad or Foreign Language Student Residence students only.

301. Introduction to Japanese Literature. (4:5:0) Prerequisite: Japan 202 or instructor's consent.

Readings in Japanese history and literature with essential characters, vocabulary, and grammatical principles.

311R. Third-Year Conversation. (2:2:0 ea.) Prerequisite: Japan 301 or equivalent.

May be repeated for Study Abroad in Japan.

321. Selected Readings and Grammar. (3:3:0) Prerequisite: Japan 301 or equivalent.

Readings in modern documentary styles, emphasizing grammar, reading comprehension, and vocabulary building.

322. Selected Readings and Grammar. (3:3:0) Prerequisite: Japan 321 or instructor's consent.

Readings in modern short fiction, emphasizing grammar, reading comprehension, vocabulary building, and stylistic analysis.

325. Japanese Morphology, Syntax, and Semantics. (3:3:0) Prerequisite: Japan 301.

General overview of grammar and its practical application in composition.

326. Contrastive Analysis of Japanese and English. (3:3:0) Prerequisite: Japan 301.

Contrastive overview of Japanese and English phonology, syntax, semantics, and discourse.

343. Japanese Literature in Translation—Poetry, Drama. (3:3:0)

Reading and discussion of selected topics in Japanese poetry and drama. All readings in English.

344. Japanese Literature in Translation—Prose. (3:3:0)

Reading and discussion of selected topics in early Japanese prose. All readings in English.

345. Japanese Culture. (3:3:0)

General survey emphasizing aesthetics, religion, and value systems. All readings in English.

353. Modern Japanese Novel in Translation. (3:3:0)

Several major twentieth-century Japanese novels. All readings in English.

377. Japanese Language Teaching Procedures. (3:3:0) Prerequisite: Japan 301 or instructor's consent.

Acquiring knowledge and skills specific to teaching of Japanese as a foreign language. Conducted in Japanese and English.

399R. Cooperative Education: Internship. (1-9:0:0 ea.) Prerequisite: Japan 301.

On-the-job cultural and/or language experience.

441. Introduction to Classical Japanese. (3:3:0) Prerequisite: Japan 301 or equivalent.

Reading of premodern texts, emphasizing grammar and syntax, and showing differences from and influences on the modern idiom.

443. Advanced Readings and Grammar. (3:3:0) Prerequisite: Japan 322 or equivalent.

Reading and discussion of modern expository texts; developing advanced listening skills using authentic materials.

444. Modern Japanese Literature. (3:3:0) Prerequisite: Japan 322 or equivalent.

Fictional texts from major twentieth-century authors. Texts primarily in Japanese.

490R. Individual Study in Japanese. (1-3:Arr.:0 ea.) Prerequisite: consent of advisor and instructor.

Topics vary. Assignments to fit individual needs of the advanced student.

Advanced Undergraduate or Graduate Course

599R. Cooperative Education: Internship. (1-9:0:0 ea.) Prerequisite: Japan 301.

On-the-job cultural and/or language experience.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

670R. Tutorial Internship in Japanese. (1-3:0:0 ea.)

680R. Special Studies in Japanese. (1-3:0:0 ea.)

690R. Seminar in Japanese. (1-3:0:0 ea.)

699R. Master's Thesis. (1-6:0:0 ea.)

Korean

BA Korean

I. Korea 202, 211, 301, 325, 495, Hist 342.

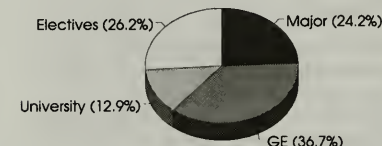
II. Either Korea 303, 321, 326, 441; or 315, 340, 443, 471.

III. Electives: 7 hours from Korea 311, 326, 344R, 345, 399R, 411, 427, 441, 471, 490R, 599R, or any of the alternatives not chosen from the required courses listed in section II.

IV. Prospective majors are urged to have a concurrent major in another standard

discipline. Students should consult with their advisor early in their program.

Summary of Degree Requirements for BA Korean



1. Total hours	128.0
2. Major hours*	31.0
3. General Education requirements	47.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0-14.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	33.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Korean Minor

Korea 303 or 315 and 7 hours beyond Korea 301.

Korean (Korea)

Undergraduate Courses

101A, B. First-Year Korean. (2:3:0 ea.)
Basic language skills.

102. First-Year Korean. (4:5:0) Prerequisite: Korea 101.
Basic language skills.

201. Second-Year Korean. (4:5:0)

Prerequisite: Korea 101, 102.
Grammar, vocabulary, reading, and conversation.

202. Second-Year Korean. (4:5:0)

Prerequisite: Korea 201 or equivalent.
Reading and writing emphasizing essential vocabulary and grammatical principles.

211R. Second-Year Conversation. (2:2:0 ea.) Prerequisite: Korea 201 or foreign residence experience.

Intermediate listening comprehension and speaking skills.

301. Intermediate Korean. (4:5:0) Prerequisite: Korea 202 or instructor's consent.

Reading, writing, grammar, and vocabulary.

303. Introduction to Sino-Korean Characters. (3:3:0) Prerequisite: Korea 301 or instructor's consent.

Most common Chinese characters used in Korean mixed script writings.

311R. Third-Year Conversation. (2:2:0 ea.) Prerequisite: Korea 211R or foreign residence experience.

Advanced conversational skills.

315. Selected Readings and Composition. (3:3:0) Prerequisite: Korea 301.

Improving reading and writing skills. Readings include minimal amounts of Sino-Korean characters.

321. Sino-Korean Readings and Composition. (3:3:0) Prerequisite: Korea 303.

Readings in Sino-Korean mixed script texts, including newspapers. Some composition.

325. Applied Korean Linguistics and Grammar. (3:3:0) Prerequisite: Korea 301 or instructor's consent.

Applying linguistics to the problems of learning Korean; overview of Korean phonology, morphology, syntax, and semantics.

326. Contrastive Analysis of Korean and English. (3:3:0) Prerequisite: Korea 325.

Contrastive overview of phonology, syntax, semantics, and discourse.

340. Introduction to Traditional Korean Literature. (4:4:0) Prerequisite: Korea 301.

Korean literature from earliest forms to modern period, emphasizing basic literary concepts.

344R. Korean Literature in Translation. (3:3:0 ea.)

Topics vary.

345. Korean Culture and Society. (3:3:0)

Understanding Korean peoples and culture through examining social, political, economic, and belief systems as well as literature. All readings in English.

399R. Cooperative Education: Internship. (1-9:0:0 ea.) Prerequisite: Korea 301.

On-the-job cultural and/or language experience.

411. Advanced Conversation. (2:2:0)

Advanced conversation and listening comprehension.

427. Korean Translation and Interpretation. (3:3:0) Prerequisite: Korea 301.

Translation techniques with practice in oral and written translation both from Korean to English and from English to Korean.

441. Korean Documents. (4:4:0) Prerequisite: Korea 321 or Chin 441.

Introduction to readings in Chinese texts written as part of Korea's historic tradition, such as genealogies and the Yi Dynasty Annals. Also current political and economic materials.

443. Modern Korean Literature. (4:4:0)

Prerequisite: Korea 340.

Survey emphasizing the improvement of reading and translation skills. Criticism of literature as well as translations.

471. Advanced Readings in Korean Language and Literature. (3:3:0)

Prerequisite: Korea 325.

Readings in current linguistic journals and contemporary literature and criticism.

490R. Individual Study in Korean. (1-3:Arr:0 ea.)

Directed readings and individual assignments appropriate to individual needs of advanced students.

495. Senior Seminar. (2:2:0)

Individual research, with seminar paper the primary objective. Required for Korean majors.

Advanced Undergraduate or Graduate Course

599R. Cooperative Education: Internship. (1-9:Arr:0 ea.) Prerequisite: consent of coordinator and department.

On-the-job cultural and/or language experience. Students must meet departmental requirements and consult coordinator before enrollment. Report required.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

670R. Tutorial Internship in Korean. (1-3:0:0 ea.)

680R. Special Studies in Korean. (1-3:0:0 ea.)

690R. Seminar in Korean. (1-3:0:0 ea.)

699R. Master's Thesis. (1-6:0:0 ea.)

Asian Languages Courses (AsLa)

342. Oriental Mythology. (3:3:0)

Discussion of myths, legends, and folklore traditions in Oriental cultures.

490R. Individual Study in Asian Literature. (1-3:Arr:Arr. ea.) Prerequisite:

lower-division courses, mission or commensurate experience, and instructor's consent.

Assignments to fit individual needs of advanced students.

Cantonese Courses (Cant)

101A, B. First-Year Cantonese. (2:3:0 ea.) Basic language skills.

102. First-Year Cantonese. (4:5:0) Basic language skills.

201. Second-Year Cantonese. (4:4:0)

Prerequisite: Cant 102 or foreign residence experience.

Grammatical patterns and vocabulary of spoken and written Cantonese.

202. Second-Year Cantonese. (4:5:0) W

Prerequisite: Cant 201 or equivalent.

Intermediate to advanced skills in reading, writing, listening, and speaking.

211R. Second-Year Conversation. (2:2:0 ea.) Cant 201 or foreign residence experience.

Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation. (2:2:0 ea.) Cant 211 or foreign residence experience.

Advanced conversational skills.

Hindi Courses (Hindi)

101, 102. First-Year Hindi. (4:5:0 ea.) Basic language skills.

Thai Courses (Thai)

101. First-Year Thai. (4:5:0) Basic language skills.

102. First-Year Thai. (4:4:0 ea.) Continuation of Thai 101.

201. Second-Year Thai. (4:5:0) Prerequisite: Thai 101 and 102 or foreign residence experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation. (2:2:0 ea.) Prerequisite: Thai 201 or foreign residence experience.

Intermediate listening comprehension and speaking skills.

301. Intermediate Modern Thai. (4:5:0)

Prerequisite: Thai 201 or foreign residence experience.

311R. Third-Year Conversation. (2:2:0 ea.) Prerequisite: Thai 211R or foreign residence experience.

Advanced conversational skills.

Vietnamese Courses (Viet)

101A, B. First-Year Vietnamese. (2:3:0 ea.) Basic language skills. Credit only by examination.

102. First-Year Vietnamese. (4:5:0) Prerequisite: Viet 101.

Basic language skills. Credit only by examination.

201. Second-Year Vietnamese. (4:5:0)
Prerequisite: Viet 101 and 102 or foreign residence experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading. Credit only by examination.

211R. Second-Year Conversation. (2:2:0 ea.)
Prerequisite: Viet 201 or foreign residence experience.

Intermediate listening comprehension and speaking skills. Credit only by examination.

311R. Third-Year Conversation. (2:2:0 ea.)
Prerequisite: Viet 211 or foreign residence experience.

Advanced conversational skills. Credit only by examination.

Near Eastern Languages and Literature (NeLg)

Language Courses

Modern: Farsi (Persian) Course

321R. Studies in Modern Near Eastern Languages. (4:4:2 ea.)

Grammar, reading, writing, and conversational skills.

Ancient: Akkadian, Aramaic, Coptic, Egyptian, Hittite, Sumerian, Syriac, and Ugaitic Course

511R. Studies in Ancient Near Eastern Languages. (2-4:4:0 ea.)

Grammar and reading skills.

Literature Courses

340. Ancient Near Eastern Mythology. (3:3:0)
Major themes in mythological literature of Egypt, Canaan, Mesopotamia, Anatolia, and ancient Iran. All readings in English.

345. Texts and Ancient Temples. (3:3:0)
Major ancient Near Eastern texts dealing with the temple; analysis of primary elements of ancient temple type as a place of worship.

521R. Special Topics in Ancient Near Eastern Literature. (2-3:3:0 ea.)

Historical and comparative studies of ancient Near Eastern literature.

Arabic

Arabic Minor

I. Prerequisite: Arab 101, 102, 201, 211R, 301.

II. Required: Arab 311R, 451, 452; two of Arab 331, 431, 453, 461, 462, 471, 490R; one of Hum 242, Arab 361, 362 (all taught in English).

Arabic (Arab)

Undergraduate Courses

100. Introduction to Arabic. (1:1.5:0)

Beginning Arabic; offered at Jerusalem Center for Near Eastern Studies.

101. First-Year Arabic. (4:5:0)

Basic skills of spoken and written Arabic. Suggested first class for students learning Arabic.

102. First-Year Arabic. (4:5:0) Prerequisite: Arab 101.

Second-semester Arabic. Basic language skills, both spoken and written.

201. Second-Year Arabic—Standard, Written. (4:5:0) Prerequisite: Arab 102 or equivalent experience and concurrent registration in Arab 211R.

Reading, grammar review, and vocabulary building in written Arabic.

211R. Second-Year Conversation. (2:2:0 ea.) Prerequisite: Arab 102 or equivalent experience and concurrent registration in Arab 201.

Intermediate spoken Arabic.

301. Intermediate Arabic—Standard, Written. (4:5:0) Prerequisite: Arab 201 and concurrent registration in Arab 311R.

Continuation of Arab 201.

311R. Third-Year Conversation. (2:2:0 ea.) Prerequisite: Arab 201, 211R, or equivalent experience, and concurrent registration in Arab 301.

Advanced conversation skills.

331. Spoken Arabic. (4:5:0) Prerequisite: Arab 311R or equivalent experience.

Intensive study of the spoken language.

361. Introduction to Modern Arabic Literature in Translation. (3:3:0)

Reading and discussion of representative sample of modern Arabic short stories, novels, plays, and poetry. All readings in English.

362. Introduction to Medieval Arabic Literature in Translation. (3:3:0)

Reading and discussion of representative sample of medieval Arabic literature. All readings in English.

431. Spoken Arabic—Egyptian Dialect. (4:5:0) Prerequisite: Arab 331 or equivalent experience.

Introduction to colloquial literature.

451. Advanced Grammar Review. (4:5:0) Prerequisite: Arab 301.

Intensive vocabulary building and grammar review.

452. Newspaper Arabic. (4:5:0) Prerequisite: Arab 451.

Extensive reading of Arabic newspapers and magazines, with appropriate vocabulary building.

453. Readings in the Social Sciences. (3:3:0) Prerequisite: Arab 452.

Reading of original Arabic sources in political science, history, international relations, and other social science fields.

461. Survey of Modern Arabic Literature. (3:3:0) Prerequisite: Arab 452.

Reading and discussion of representative sample of modern Arabic short stories, novels, plays, and poetry.

462. Survey of Medieval Arabic Literature. (3:3:0) Prerequisite: Arab 452.

Reading and discussion of representative sample of medieval Arabic literary works, including poetry, 'Adab literature, Maqaamaat, folk literature, travel literature, biography, philosophy, and history.

471. The Structure of Arabic. (3:3:0) Prerequisite: Arab 452.

Arabic phonology, morphology, syntax, and semantics, with a review of current scholarship in Arabic linguistics.

490R. Independent Readings. (1-3:Arr.:0 ea.) Prerequisite: instructor's consent.

Independent readings of Arabic materials.

Advanced Undergraduate or Graduate Course

531R. Advanced Topics in Arabic. (1-3:5:0 ea.) Prerequisite: instructor's consent.

Advanced studies in Arabic language and literature.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

670R. Tutorial Internship in Arabic. (1-3:0:0 ea.)

680R. Special Studies in Arabic. (1-3:0:0 ea.)

690R. Seminar in Arabic. (1-3:0:0 ea.)

699R. Master's Thesis. (1-6:0:0 ea.)

Hebrew

Hebrew Minor

Required courses: Heb 201, 202, 331, 431, and 4 hours from 311R, 341, 441, 442, 443, 444.

Hebrew (Heb)

Undergraduate Courses

100. Introduction to Hebrew. (1:1.5:0)

Beginning Hebrew; offered at Jerusalem Center for Near Eastern Studies.

101, 102. First-Year Hebrew. (4:5:2 ea.)

Modern Hebrew as spoken in Israel today.

111M, 112M. Honors Hebrew and the Old Testament. (3:3:0 ea.)

Rapid survey of biblical Hebrew. Must be taken in conjunction with specified Honors section of RelA 301 and 302.

131, 132. First-Year Biblical Hebrew. (4:5:0 ea.) Independent Study also.

Old Testament Hebrew. Provides foundation in grammar and vocabulary; reading Hebrew prose texts in Bible.

201. Second-Year Modern Hebrew. (4:5:0) Prerequisite: Heb 102 or equivalent.**202. Intermediate Readings.** (4:4:0) Prerequisite: Heb 201 or equivalent.**311R. Intermediate Conversation.** (2:2:0 ea.) Prerequisite: Heb 201.**331. Readings in the Hebrew Scriptures 1.** (4:5:0) Prerequisite: Heb 132, 201, or equivalent.

Grammar review and vocabulary building through reading historical and prophetic books.

341. Introduction to Hebrew Literature. (3:3:0) Prerequisite: Heb 132 or 331; 202.

Survey of 3,000 years of Hebrew literature; in Hebrew.

431. Readings in the Hebrew Scriptures 2. (4:4:0) Prerequisite: Heb 331.

Readings in the poetic and wisdom literature.

441. Postbiblical Hebrew: Mishnah. (2:2:0) Prerequisite: Heb 331.

Introduction to the grammar of Mishnaic Hebrew. Readings from various tractates of the Mishnah.

442. Postbiblical Hebrew: Talmud. (2:2:0) Prerequisite: Heb 331.

Selected readings from the Talmud.

443. Postbiblical Hebrew: Medieval Rabbis. (2:2:0) Prerequisite: Heb 331.

Readings in medieval rabbinic commentaries on the Hebrew scriptures.

444. Postbiblical Hebrew: Modern Hebrew Biblical Commentaries. (2:2:0) Prerequisite: Heb 331.

Readings in commentaries on the Hebrew scriptures in modern Hebrew.

Advanced Undergraduate or Graduate Course**531R. Studies in Hebrew.** (1–3:3:0 ea.) Prerequisite: Heb 331.**Turkish Courses (Turk)****101, 102. First-Year Turkish.** (4:4:0 ea.) Basic grammar, vocabulary, simple reading.**201. Second-Year Turkish.** (4:4:0)

Reading emphasis, middle school texts.

301. Intermediate Turkish. (4:4:0)

Reading emphasis, varied selected topics.

Asian Studies

See Kennedy Center for International Studies, David M.

Astronomy

See Physics and Astronomy.

Austronesian Languages

See Linguistics.

Biology**Degree Programs****Biology–Composite Teaching**

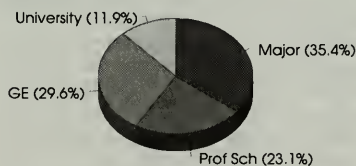
Richard R. Tolman, Coordinator (591 WIDB)

Program requirements are outlined in the Secondary Education, Botany and Range Science, Microbiology, and Zoology sections of this catalog.

BS Biology (leading to a DDS)

Don D. Bloxham, Coordinator (380 WIDB)

Students with required GPA and DAT scores may obtain admission to specified dental schools after three years of pre-dental education at BYU. After completion of the first year of dental school, these students will receive a bachelor's degree in biology from BYU. Details are available in 380 WIDB.

Summary of Degree Requirements for Biology/Professional School Combined Degree Program

1. Total hours	138.5
2. Major hours ♦	49.0
3. First year of Professional School	32.0
4. General Education requirements	41.0
Core	16.0

First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
5. University requirements	16.5
Religion	14.0
PE/Health	2.5
6. Elective hours	0.0
7. 40 hours upper-division GPA requirement of 2.0	
8. Estimated semesters to graduate	
13 hours per semester	10.5
16 hours per semester	8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Biology Courses (Biol)**100. Principles of Biology.** (3:3:0) F, W, Sp, Su Honors and Independent Study also.

Introductory course for General Education students.

101. Principles of Biology Laboratory. (1:0:2)

F, W, Sp, Su Prerequisite: concurrent registration in Biol 100. Required of all elementary education and early childhood education majors; enrollment limited to elementary education or early childhood education majors.

130. Introduction to Biology. (4:4:1) F, W, Sp Principles of biology for majors and minors.**190. Biology and Agriculture Seminar.** (1:1:0) F, W

Explores educational options: presentations by faculty and guest lecturers.

276. (Biol-Botny) Heredity and Reproduction. (3:3:0) Independent Study also. Prerequisite: any biology course. Principles of inheritance.**398R. Biology Teaching Seminar.** (1–2:0:0 ea.) F, W, Sp, Su

Students in an academic team assist instructor in design and/or implementation of a class.

Botany and Range Science

Wilford M. Hess, Chair (401 WIDB)

Professors

Andersen, William R. (1966) BS, MS, Utah State U., 1956, 1958; PhD, U. of California, Davis, 1963.
Brotherson, Jack D. (1969) BS, MA, Brigham Young U., 1964, 1967; PhD, Iowa State U. of Science and Technology, 1969.

- Cates, Rex G. (1985) BS, MS, Utah State U., 1965, 1968; PhD, U. of Washington, 1971.
- Cox, Paul Alan (1983) BS, Brigham Young U., 1976; MSC., U. of Wales, 1978; A.M., PhD, Harvard U., 1978, 1981.
- Flinders, Jerran T. (1976) BS, MS, U. of Utah, 1967, 1968; PhD, Colorado State U., 1971.
- Harper, Kimball T. (1973) BS, MS, Brigham Young U., 1958, 1960; PhD, U. of Wisconsin, Madison, 1963.
- Hess, Wilford M. (1962) BS, Brigham Young U., 1957; MS, PhD, Oregon State U., 1960, 1962.
- Rushforth, Samuel R. (1970) BS, Weber State Coll., 1966; MS, PhD, Brigham Young U., 1968, 1970.
- Smith, Bruce Nephi (1974) BS, MS, U. of Utah, 1959, 1962; PhD, U. of Washington, 1964.
- Tidwell, William D. (1966) BS, MS, Brigham Young U., 1954, 1963; PhD, Michigan State U., 1966.
- Vallentine, John F. (1968) BS, Kansas State U., 1952; MS, Utah State U., 1953; PhD, Texas A&M U., 1959.
- Weber, Darrell Jack (1969) BS, MS, U. of Idaho, 1958, 1959; PhD, U. of California, Davis, 1963.
- Welsh, Stanley L. (1960) BS, MS, Brigham Young U., 1951, 1957; PhD, Iowa State U. of Science and Technology, 1960.

Associate Professor

- St. Clair, Larry Lee (1976) BS, MS, Brigham Young U., 1974, 1975; PhD, U. of Colorado, 1984.

Assistant Professors

- Anderson, Val Jo (1989) A.S., Snow Coll., 1980; BS, MS, Utah State U., 1982, 1985; PhD, Texas A&M U., 1989.
- Fairbanks, Daniel J. (1988) BS, Brigham Young U., 1982; MS, U. of Minnesota, 1985; PhD, U. of Arizona, 1988.

Professional Professor

- Furniss, H. Blaine (1971) BS, MS, Brigham Young U., 1968, 1975.

Professional Associate Professor

- Gardner, John S. (1989) BS, Oregon State U., 1968; MS, PhD, Brigham Young U., 1976, 1978.

Adjunct Faculty

- Atwood, Collins, Davis, Gunasekaran, Hughes, Johansen, Lawson, McArthur, Meyer, Monsen, Nebeker, Nelson, Pearson, Pederson, B. Pendleton, R. Pendleton, Wagner

Emeriti

- Allen, James Vincent (1969) BS, MS, Brigham Young U., 1967, 1968.
- Harrison, Bertrand F. (1931) BS, MS, Brigham Young U., 1930, 1931; PhD, U. of Chicago, 1937.
- Liechty, William R. (1966) BA, MA, Brigham Young U., 1940, 1952.
- Moore, Glen (1954) BS, Brigham Young U., 1949; PhD, U. of Chicago, 1954.
- Stutz, Howard C. (1952) BS, MS, Brigham Young U., 1940, 1951; PhD, U. of California, Berkeley, 1956.

- VanCott, John W. (1958) BS, Utah State U., 1941.

- Whitton, Leslie (1962) BS, Utah State U., 1949; MS, U. of California, Davis, 1953; PhD, Cornell U., 1964.

Programs and Degrees

BS Botany

Emphases:

- Botany
- Biotechnology
- Premedical-Predental

BS Molecular Biology

BS Conservation Biology

Emphases:

- Resource Conservation
- Premedical-Predental
- Wildlife Biology

BS Range Science

Emphases:

- Production-Agribusiness
- Range Resources

BS Wildlife and Range Resources

Emphases:

- Wildlife and Range Resources
- Premedical-Predental

BS Biology Composite Teaching

MS Biological Science Education

MS Botany

Emphases:

- Biotechnology
- Botany
- Conservation Biology
- Genetics
- Natural Resource Development

MS Molecular Biology (collegewide interdisciplinary degree)

MS Range Science

MS Wildlife and Range Resources

PhD Botany

Emphases:

- Biotechnology
- Genetics

PhD Molecular Biology (collegewide interdisciplinary degree)

PhD Wildlife and Range Resources

Plants play a crucial role in the maintenance of life on this planet. The programs in the Department of Botany and Range Science address the historical, current, and future importance of plants in three broad areas: botany, conservation biology, and education.

Botany includes biotechnology, genetics, molecular biology, physiology, morphology, systematics, and ecology. Traditional fields are combined with recent areas of specialization that qualify students for a wide range of careers in the study, culture, and utilization of plants. Graduates find employment with private industry, state, and federal agencies and are well prepared for graduate programs.

Conservation biology deals with the protection, maintenance, and restoration of biodiversity on earth through study of plants and the animals with which they interact, as well as processes of global change that affect their populations. The broad approach of the

conservation biology program prepares students for employment in governmental and private agencies charged with managing our human environment, watersheds, wildlife populations, rangelands, wetlands, forests, deserts, coastlines, seas, and other critical natural resources. In addition, this program prepares students for postgraduate training in conservation biology, wildlife, ecology, evolutionary biology, systematics, and range science.

The Biological Science Education Program reaffirms our commitment to provide rewarding courses for students in General Education, Honors, and science education. Faculty and students are involved in the development of excellent curricula, laboratory, and field experiences to enhance the appreciation and understanding of biotic systems by all students and provide excellent training for future teachers.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Botany and Molecular Biology

I. Major courses: Botny 341, 342, 343, 475, 491.

II. Supporting course: Biol 130.

III. Recommended electives: Botny 205, 480; Chem 223; Geog 401; Geol 111, 112; Mcbio 221, 222.

IV. Only 5 hours of D credit in required supporting courses and no grades lower than C- in any major course will be accepted for graduation.

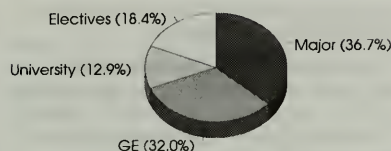
BS Botany

Botany Emphasis

I. In addition to above core requirements: AgHrt 282, 283; Botny 210, 321, 331, 332, 350, 351, 440, 485; Math 110; Math 119 or Phscs 100; AgHrt 240 or CS 131; Chem 105, 106, 107; or 101, 103, 152; Stat 222 or 501.

II. Additional recommended electives: Chem 284, 351, 352, 353, 481; Math 112, 113; Zool 261.

Summary of Degree Requirements for Botany Emphasis



1. Total hours 128.0
2. Major hours* 47.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 23.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

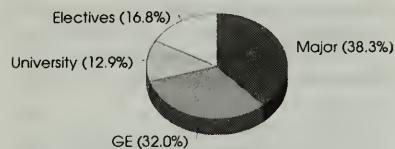
Biotechnology Emphasis

The biotechnology emphasis focuses on the applied aspects of plant genetic improvement. Students in this option take a variety of courses in both basic and applied biological sciences and gain firsthand experience in plant molecular biology, breeding, and genetics, including procedures in the greenhouse and field. This major will prepare students for employment following completion of the BS degree or for graduate studies in plant genetics, breeding, and biotechnology.

- I. In addition to above core requirements: AgHrt 459; Botny 210; 250 or 350 and 351; 321, 440, 485; Chem 105, 106; 152 or 351 and 352; Math 112, 113; or 119; Phscs 105, 106; or 121, 122.

- II. Additional electives (5 hours): AgHrt 220, 240, 282, 283, 471; Botny 480, 522, 523, 574, 559; Chem 481, 586; Mcbio 401, 441, 442.

Summary of Degree Requirements for Biotechnology Emphasis



1. Total hours 128.0
2. Major hours* 49.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 21.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

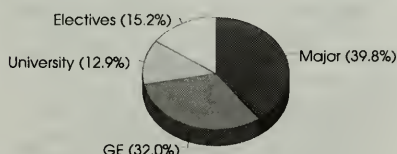
Premedical-Predental Emphasis

This emphasis is specifically designed for students preparing for advanced professional training in medicine, dentistry, or law. It also provides excellent preparation for graduate studies in the plant sciences as a career alternative.

- I. In addition to above core requirements: Botny 105; 250 or 350 and 351; Chem 105, 106, 107, or 111, 112, 226; 351, 352, 353; Math 110, 119; Zool 260, 380, 460; Phscs 105, 106, 107, 108.

- II. Additional recommended electives: AgHrt 282, 283; Botny 321; CS 130 or 131; Stat 221; Zool 331.

Summary of Degree Requirements for Premedical-Predental Emphasis



1. Total hours 128.0
2. Major hours* 51.0
3. General Education requirements 41.0
 - Core 16.0

- | | |
|--|------|
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 7.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 19.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

*Note: Hours do not include any course that could be used to fill GE or university requirements.

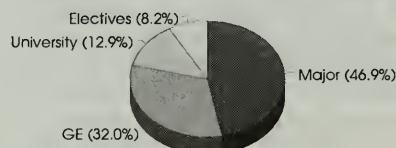
BS Molecular Biology in Botany

The molecular biology degree provides instruction in the fundamentals of biology, mathematics, physics, and chemistry along with preparation in molecular biology. This is an excellent program for students interested in graduate study in cellular and molecular biology and related fields.

- I. In addition to above core requirements: Botny 210; 250 or 350 and 351; 321, 440, 485; Chem 105, 106, 351, 352, 481; Math 112, 113; Phscs 105, 106, 107, 108; or Phscs 121, 122, 221; Mcbio 441, 442.

- II. Additional recommended electives: Botny 522, 523; 530 or 531; Chem 468, 582, 584; Mcbio 404, 504, 561.

Summary of Degree Requirements for BS Molecular Biology in Botany



1. Total hours 128.0
2. Major hours* 60.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 10.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0

8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Conservation Biology

Core Requirements for All Degree Programs in Conservation Biology

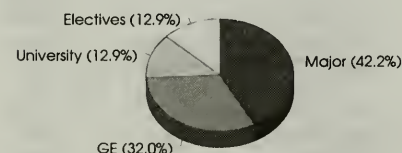
- I. Major course: Botny 407.
- II. Supporting courses: Biol 130, Math 119, Zool 204.
- III. Only 5 hours of D credit in required supporting courses and no grades lower than C- in any major course will be accepted for graduation.

Resource Conservation Emphasis

The resource conservation emphasis is designed to provide students with a broad scientific, ethical, and cultural background in preparation for a career in professional conservation. Graduates will be equipped to deal with the issues and problems of conservation of endangered biota, the long-term preservation of biodiversity, development, and preservation of natural resources, sustainable resource usage, and management and conservation of ecosystems. Students will find employment in many realms of environmental and cultural biology in developed as well as undeveloped countries.

- I. In addition to above core requirements: Botny 105, 341, 350, 351, 415R, 440, 475; Chem 101, 103, 152; or 105, 106, 107; Math 110; PhyS 100; Stat 222.
- II. 20 hours from AgHrt 282, 283, 303, 308, 491R; Botny 120, 205, 210, 250, 400, 405; Econ 240; Geog 101, 301; Geol 101, 111; HonP 244R, 324R, 344R; PlSc 340, 535, 536; Range 455.
- III. Additional recommended electives: Botny 550; Geog 212, 401; AgHrt 240, 305; Econ 110; Geol 103, 112; Geog 515; PlSc 558.

Summary of Degree Requirements for Resource Conservation Emphasis



1. Total hours 128.0
2. Major hours♦ 54.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0

- Advanced Math/Foreign Language 7.0
- Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 16.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

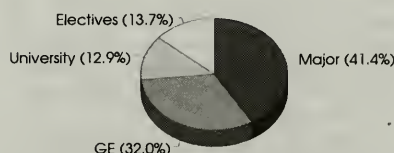
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Premedical-Pre dental Emphasis

This emphasis would appeal to students concerned about ecology, natural resources, and conservation who also desire a career in medicine.

- I. In addition to above core requirements: Botny 341, 342, 350, 351, 440, 475; Chem 105, 106, 107, 351, 352, 353; Math 110; Phscs 105, 106, 107, 108; Zool 260, 380.
- II. Additional recommended electives: Botny 250; Chem 223, 481; Geog 120, 331; Geol 111; Mcbio 221, 222, 401; PlSc 230; Zool 317.

Summary of Degree Requirements for Premedical-Pre dental Emphasis



1. Total hours 128.0
2. Major hours♦ 53.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 17.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

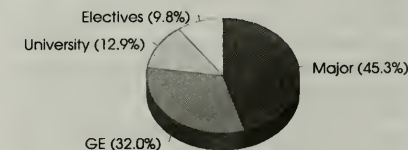
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Wildlife Biology Emphasis

This emphasis fulfills the educational requirements suggested by the Wildlife Society for its Professional Wildlife Biologist Certification Program. Students with this emphasis fully qualify on the Federal Register for employment as wildlife biologists. It also prepares students for eventual professional affiliations with state wildlife agencies as well as a number of federal and international agencies. It is an excellent choice for those planning to enter wildlife or conservation biology graduate programs. Students also qualify as conservation biologists.

- I. In addition to above core requirements: Botny 210; Chem 101, 103, 152; Range 225, 330, 505, 565; Stat 222; Zool 344, 446, 447, 457, 475.
- II. One of AgHrt 282, Geog 212, Geol 104, PhyS 100; one of Botny 350, Range 354, Zool 350; one of Botny 351, Range 351, Zool 351; one of Botny 276, 341; one of Geog 515, Range 455; one of Botny 440, Chem 181, Zool 460.
- III. Certification requirements include 9 hours in humanities and social sciences; 12 hours in communications; and 6 hours in policy, administration, and law. Consult advisor for assistance.
- IV. Additional recommended electives: Comms 150, 255; Econ 240; Geog 310, 401; Geol 480, 586; PlSc 535, 536; Zool 330, 556.

Summary of Degree Requirements for Wildlife Biology Emphasis



1. Total hours 128.0
2. Major hours♦ 58.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 12.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0

8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Range Science

Core Requirements for All Degree Programs in Range Science

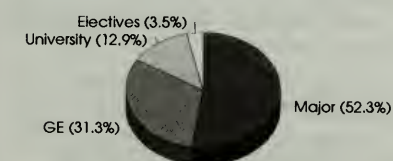
- I. Major courses: Range 191, 215, 225, 330, 345, 351, 354, 455, 462, 466; Botny 276, 440.
- II. Supporting courses: AgHrt 240, 282, 283, 303; AnSc 207; 400 or 420; Math 110; Stat 222, Engl 316; Chem 101, 103, 152.
- III. Only 5 hours of D credit in required supporting courses and no grades lower than C- in any botany or range course will be accepted for graduation.

Production-Agribusiness Emphasis

This emphasis not only includes basic range science courses but also expands training into production agriculture and agribusiness. Additional courses are taken in animal production, forages, and agricultural economics. Besides meeting the requirements of the federal range conservationist and soil conservationist positions, the courses prepare for private-sector careers in ranching, agricultural services, and consulting.

- I. In addition to above core requirements: Acc 200; Econ 110, 210, 260; Biol 100; Range 346, 441, 561, or AgHrt 151.
- II. Recommended electives: Range 347, 465; AnSc 310, 312, 315; 400 or 420; AgHrt 151, 302, 305, 306, 308, 425.

Summary of Degree Requirements for Production-Agribusiness Emphasis



1. Total hours 128.0
2. Major hours ♦ 67.0
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 4.5
6. 40 hours upper-division GPA requirement of 2.0

7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

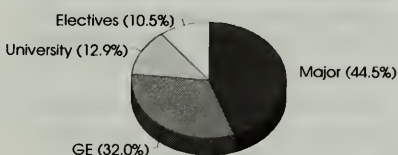
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Range Resources Emphasis

This emphasis provides the broad ecological background and natural resource training necessary for the multiple-use management of range and related wildlands. Students are trained to manage livestock and big game grazing and correlate this with watershed, timber, recreation, and energy resources in the federal, state, and private sector. Students are not only highly qualified for federal range conservationist and soil conservationist positions but also for related state and private employment.

- I. In addition to above core requirements: Biol 130; Botny 210; Range 469, 561.
- II. Recommended electives: Range 441, 515, 527, 565; RMYL 425, 523; Zool 344.

Summary of Degree Requirements for Range Resources Emphasis



1. Total hours 128.0
2. Major hours ♦ 57.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 13.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Wildlife and Range Resources

Core Requirements for All Degree Programs in Wildlife and Range Resources

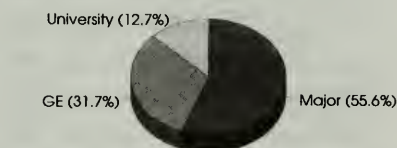
- I. Major courses: Range 191, 215, 225, 351, 354; Botny 210.
- II. Supporting courses: Biol 130; Stat 222; Zool 204, 344; 446 or 447.
- III. Only 5 hours of D credit in required supporting courses and no grades lower than C- in any major course will be accepted for graduation.

Wildlife and Range Resources Emphasis

This emphasis satisfies the requirements of the Federal Register in three professional areas: wildlife biology, range conservation, and soil conservation. It prepares students for eventual professional affiliations with state wildlife agencies as well as a number of federal agencies, including the U.S. Forest Service, Bureau of Land Management, Fish and Wildlife Service, and the Park Service. Graduates are well prepared to deal with complex issues involving wildlife management, range management, and the overall conservation of natural resources. It also prepares students for graduate programs.

- I. In addition to above core requirements: AgHrt 240, 282, 283, 303; AnSc 207; Botny 276, 440; Chem 101, 103, 152; Engl 316; Math 110; Range 330, 345, 455, 466, 469, 505, 561; Zool 475.
- II. Recommended electives: Econ 240; Range 515, 527, 565; RMYL 425, 523; Zool 457.

Summary of Degree Requirements for Wildlife and Range Resources Emphasis



1. Total hours 129.5
2. Major hours ♦ 72.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 0.0
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0

8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

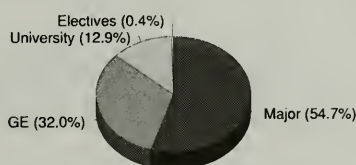
♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Premedical-Predental Emphasis

The primary goal of this emphasis is to prepare students to pursue a career in medicine. A secondary goal is to establish an educational basis for appreciation and ethical consideration of the wildlife and range resources of the world. Additional courses can be prescribed for those seeking careers in wildlife and/or range resources.

In addition to above core requirements: Botny 341, 342, 343, 475; Chem 105, 106, 107, 351, 352, 353; Range 455 or Zool 457; Range 527 or 565; Phscs 105, 106, 107, 108; Zool 260, 460.

Summary of Degree Requirements for Premedical-Predental Emphasis



- | | |
|--|-------|
| 1. Total hours | 128.0 |
| 2. Major hours ♦ | 70.0 |
| 3. General Education requirements | 41.0 |
| Core | 16.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 7.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 0.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BS Biology Composite Teaching

See Biology in the Secondary Education section of this catalog for information about the teaching major.

Botany Minor

The requirement for a minor in botany may be fulfilled with a minimum of 18 credit hours in plant science and/or genetics courses. Recommended courses are Botny 105, 341, and 440. Biol 130 is accepted. No more than one class may overlap with a designated major.

Conservation Biology Minor

The requirement for a minor in conservation biology may be fulfilled by completing 9 hours from Botny 250, 400, 405, 407, 415R; and 9 hours from Econ 240; Geog 101; Geol 101; HonP 324R; PlSc 340.

Range Minor

The requirement for a minor in range science may be fulfilled with a minimum of 12 credit hours from the following range science courses: 215, 225, 330, 351, 354, 455, 461, 466, 469, 561, 565.

Botany (Botny)

Undergraduate Courses

- 105. Plants Through the Ages.** (3:3:0) F, W Independent Study also. Prerequisite: Biol 100 or equivalent.
Comparative and evolutionary investigation of the origin and development of plants.
- 120. Plants and Civilization.** (3:3:0) F, W Relationships of plants to human affairs.
- 205. Field Botany.** (3:2:4) F, Sp Common trees and shrubs and their uses.
- 210. Plant Classification.** (3:2:3) W, Sp Prerequisite: Biol 130 or equivalent.
General principles of taxonomy and use of manuals, emphasizing classification of temperate flora.
- 220. Plant Science.** (2:2:0) W Basic concepts of plant science for students not taking Biol 130.
- 250. (Botny-Zool) Environmental Biology.** (3:3:0) F, W Prerequisite: Biol 100 or equivalent.
Conservation and management of natural resources concurrent with increasing socioeconomic and human population demands.
- 276. (Botny-Biol) Heredity and Reproduction.** (3:3:0) W Independent Study also. Prerequisite: any biology course.
Principles of inheritance.
- 321. Plant Anatomy.** (3:1:5) W even yr. Prerequisite: Biol 130 or equivalent.
Structure of cells, tissues, and organs of vascular plants.
- 331. Nonvascular Plants and Fungi.** (3:2:3) W even yr. Prerequisite: Biol 130.
Structures, life histories, and relationships of algae, bryophytes, and fungi.

- 332. Vascular Plant Morphology.** (2:1.5:1.5) W odd yr. Prerequisite: Biol 130.
Structures, life histories, and relationships.

- 341. (Botny-Mcbio-Zool) Genetics and Cellular Biology 1.** (4:4:1) F, W, Su Prerequisite: Biol 130.

General genetics and molecular biology of cellular structure and function.

- 342. (Botny-Mcbio-Zool) Genetics and Cellular Biology 2.** (3:3:1) F, W, Su Prerequisite: Botny-Mcbio-Zool 341.

Continuation of Botny-Mcbio-Zool 341.

- 343. (Botny-Mcbio-Zool) Genetics and Cellular Biology Laboratory.** (1:0:3) F, W, Su Prerequisite: prior or concurrent registration in Botny-Mcbio-Zool 342.

- 350. (Botny-Zool) Ecology.** (3:3:0) F, W Prerequisite: Biol 130 or equivalent.

Principles and theory of plant and animal ecology. Analyzing distribution and abundance of life on earth.

- 351. (Botny-Zool) Ecology Laboratory.** (1:0:3) F, W Prerequisite: prior or concurrent registration in Botny-Zool 350.

Introduction to major ecological concepts through field or laboratory exercises, emphasizing appropriate methods for measuring variation under field conditions. Field trips and one major paper required.

- 399R. (Botny-Range) Cooperative Education.** (1-9:Arr:Arr. ea.) F, W, Su Prerequisite: supervisor approval.

On-the-job experience and education.

- 400. Conservation of Plant Resources.** (2:2:0) On dem.

Identifying, preserving, and enhancing unusual but valuable plant resources.

- 405. Readings in Conservation Biology.** (2:2:0) W odd yr. Prerequisite: Botny 250 or equivalent.

Survey of classical and recent literature in conservation biology.

- 407. Conservation Biology.** (3:3:0) W Prerequisite: Biol 130 or equivalent.

Concepts, database, and techniques required to successfully conserve biotic resources.

- 415R. Senior Colloquium in Conservation Biology.** (2:2:0 ea.) W Prerequisite: senior standing in conservation biology or instructor's consent.

Current topics. Internship or experience with private or governmental organization arranged. Research project required.

- 440. Plant Physiology.** (4:3:3) W Prerequisite: Biol 130 and college chemistry.

Recommended: Chem 181; or 351, 352.
Photosynthesis, respiration, water relations, mineral nutrition, growth of flowering plants.

475. (Botny-Zool) Evolutionary Science. (3:3:0) F, W, Alt. term Prerequisite: preceding courses in college core curriculum or instructor's consent.

Observed organic change and apparent history of life on earth. Comparing study methods, interpreting data, evaluating evidence.

480. Plant Pathology. (3:2:3) F odd yr.

Important plant diseases—their identification, causes, and methods of control.

485. Plant Biotechnology. (3:2:3) W odd yr. Prerequisite: Biol 130.

Introduction to methodology of modern plant biotechnology.

491. Senior Seminar. (2:2:0) W

Synthesis of major areas of botanical knowledge.

492R. Undergraduate Research

Participation. (1–18:0:Arr. ea.) F, W, Sp, Su Prerequisite: senior standing and consent of supervisor.

Independent student research under faculty supervision.

498R. Special Problems. (1–6:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of supervisor.

Multiple titles include: Genetics, Morphology, Ecology, Mycology, Medical Botany.

Advanced Undergraduate or Graduate Courses

500. (Botny-Range) Chemical and Physiological Ecology. (3:3:0) F on dem. Prerequisite: Biol 130, Botny 350, or equivalents, or instructor's consent.

Secondary metabolites and their role in population, community, and ecosystem phenomena.

510. Advanced Taxonomy. (3:2:3) F on dem. Prerequisite: Botny 210 or instructor's consent.

Review of taxonomic literature and of research methods. One three-day field trip arranged.

515. (Botny-Range) Agrostology: Taxonomy and Ecology of Grasses. (3:2:4) W even yr. Prerequisite: Botny 210.

Classification and ecology of grasses, emphasizing important forage species.

520. Ethnobotany. (3:2:3) W on dem. Prerequisite: Botny 120.

Use of plants by diverse human cultures. Integration of current anthropological and botanical literature, emphasizing ethnobotanics, survival strategies, and ethnomedicine.

521. Ethnobotany Practicum. (1–5:Arr.:Arr.) On dem. Prerequisite: Botny 520.

Ethnobotanical research. May require field trip outside continental U.S. Emphasizes participant observation, interviewing techniques, documentary video and film, botanical collecting techniques, and chemical extraction.

522. Biological Instrumentation. (2:2:0) W even yr. Prerequisite: graduate status or instructor's consent.

Theory and application of research instruments to biological problems.

523. Biological Instrumentation Laboratory. (2:0:6) W even yr. Prerequisite: Botny 522 or concurrent registration.

Operating research instruments.

526. (Botny-Zool) Cell Biology. (3:3:0) F on dem. Prerequisite: introductory course in biochemistry.

Molecular physiology and ultrastructure of cells, emphasizing eukaryotic organisms.

527. (Botny-Range) Wildland Shrubs. (3:2:3) Sp even yr.

Taxonomy and ecology of wildland shrubs. Field trip required.

530. Scanning Electron Optics. (3:2:4) F, W Prerequisite: instructor's consent.

Theoretical and practical scanning electron microscopy of biological, physical science, and engineering samples, emphasizing practical applications.

531. Transmission Electron Optics. (3:2:4) F, W on dem. Prerequisite: instructor's consent.

Theoretical and practical transmission electron microscopy of biological, physical science, and engineering samples, emphasizing practical applications.

534. Lichenology. (3:2:3) On dem.

Detailed study of lichens, including classification, morphology, and ecology. Field trip required.

539. Paleobotany. (3:2:3) On dem. Prerequisite: Botny 105, Geol 103.

Morphology and relationships of fossil plants.

540R. Advanced Topics in Plant Physiology. (3:3:0 ea.) W on dem. Prerequisite: Botny 440 or instructor's consent.

550. Plant Geography. (3:2:3) W on dem.

Distribution of plant species and communities in light of present and past climates.

551. (Botny-Range) Quantitative Ecology. (3:2:3) W even yr. Prerequisite: Botny- Zool 350 or equivalent, Stat 222 or 501.

Methods of community analysis.

552. (Botny-Range) Terrestrial and Rangeland Ecosystems. (4:3:2) F even yr. Prerequisite: Botny-Zool 350 or equivalent, Stat 222 or 501.

Biotic communities of the earth; population dynamics; reproductive, life-form, and longevity patterns; species interactions; structure, dynamics, and evolution of communities.

554. Population and Conservation Biology. (3:3:0) F even yr. Prerequisite: Botny-Zool 350 or equivalent.

Analysis of populations in natural settings; theoretical and practical strategies for conserving endangered biota and preserving biodiversity.

559. (Botny-AgHrt) Plant Breeding. (2:2:0) W even yr. Prerequisite: AgHrt 459 or equivalent, Botny 341.

Genetics and methods of plant breeding related to improving agronomic and horticultural crops.

574. (Botny-AnSc) Introduction to Population Genetics. (3:3:0) F odd yr. Prerequisite: introductory courses in genetics and statistics.

Quantitative study of factors influencing changes in gene frequencies in natural and domestic animal and plant populations.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

610. Botanical Terminology and Nomenclature. (2:2:0)

630. Angiosperm Morphology. (4:3:3)

650R. Advanced Plant Ecology. (2:2:0 ea.)

678. Organic Evolution. (3:3:0)

691R. Graduate Seminar. (1:1:0 ea.)

697R. Special Problems. (1–6:Arr.:Arr. ea.)

698R. Master's Project. (1-6:Arr.:Arr. ea.)

699R. Master's Thesis. (1–9:Arr.:Arr. ea.)

799R. Doctoral Dissertation. (1–9:Arr.:Arr. ea.)

Range Science (Range)

Undergraduate Courses

191. Introduction to Wildlife, Range, and Other Applied Fields of Ecology. (1:1:0) F

Professions and curricula are discussed to help students select their individual specialization.

215. Principles of Range Management. (3:3:0) W

Overview of rangeland resources and general principles, including rangeland classification, multiple use management, natural resource policy, and grazing management.

225. Principles of Wildlife Science. (3:3:0) W odd yr. Prerequisite: Biol 100 or 130.

Principles of wildlife, habitat ecology, and management of natural resource uses with the intent to preserve species and biotic diversity. Field trip required.

330. (Range-AgHrt) Range and Pasture Plants. (3:3:3) W

Identification, characteristics, phenology, distribution, site adaptation, forage value, and response to management of significant range and pasture plants.

345. (Range-AgHrt-AnSc) Farm and Ranch Planning and Management. (3:2:2) W

Planning, implementation, and control principles and procedures for managing farm and ranch businesses; accounting and business analysis, budgeting, economic principles, structure, adjusting for risk and uncertainty.

346. (Range-AgHrt-AnSc) Agriculture Finance and Business Organization. (3:3:0) F Prerequisite: Econ 110, Acc 201, or equivalent.

Planning business financial needs, costs and sources of credit, cash flow, capital investment analysis, business organization, and estate planning.

347. (Range-AgHrt-AnSc) Agricultural Law. (1:1:0) W

Legal matters that affect agricultural business, including torts, contracts, water, and real property.

351. Range Ecology Laboratory. (1:0:3) F Prerequisite: concurrent registration in Range-Zool 354.

Introduction to major ecological concepts through field or laboratory exercises, emphasizing appropriate methods for measuring variation under field conditions. Field trips and one major paper required.

354. Range Ecology. (3:3:0) F Prerequisite: Biol 100 or 130 and concurrent registration in Range 351.

Principles and theory of plant and animal ecology. Analyzing distribution and abundance of life on earth.

399R. (Range-Botny) Cooperative Education. (1-9:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: supervisor approval.

On-the-job experience and education.

441. (Range-AgHrt) Harvested Forage Crops. (2:2:0) W even yr. Prerequisite: Range 330.

Principles of production, mechanical harvesting, storage, and utilization of forage crops.

455. Range Inventories and Analysis. (3:2:3) F even yr. Prerequisite: Range 330. Recommended: Stat 221 or equivalent, Range-Zool 354 or equivalent.

Range site, suitability, condition and trend, production, availability, utilization, and other measurements on range lands. Field trip required.

462. (Range-AgHrt-AnSc) Grazing Management. (2:2:2) W even yr. Recommended: Range 330.

Principles and practices for managing the grazing animal-forage complex. Field trip required.

466. (Range-AgHrt) Range and Pasture Development. (3:2:3) F Recommended: Range 330.

Plant control, seeding, fertilization, mechanical treatments, and livestock-handling facilities on range and pasture land. Field trips required.

469. Forest Management. (3:2:2) F odd yr.

Managing forest properties, emphasizing timber production. Field trips.

470. Natural Resource Planning and Geographical Information Systems. (3:2:3) F odd yr. Prerequisite: Range 215, 225, 351, 354.

Development of a multiple-use natural resource plan for watershed, forestry, recreation, and wildlife and livestock grazing, using GIS for data acquisition in wildland settings.

498R. Special Problems. (1-6:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: supervisor approval.

Selected range topics; includes wildlife, range management, and plant identification 1, 2, 3, and 4.

Advanced Undergraduate or Graduate Courses

500. (Range-Botny) Chemical and Physiological Ecology. (3:3:0) F on dem. Prerequisite: Biol 130, Botny 350, or equivalents, or instructor's consent.

Secondary metabolites and their role in population, community, and ecosystem phenomena.

505. Wildlife Law Enforcement. (3:3:0) W Prerequisite: Biol 130 or equivalent.

Current and historical principles of federal and state wildlife law enforcement, case development, evidence, evaluation, human rights, and testimony.

508. Physiological Plant Ecology. (3:3:0)

Influence of environmental parameters on plant growth and function, including plant morphological and physiological adaptations.

515. (Range-Botny) Agrostology: Taxonomy and Ecology of Grasses. (3:2:4) W even yr. Prerequisite: Botny 210.

Classification and ecology of grasses, emphasizing important forage species.

527. (Range-Botny) Wildland Shrubs. (3:2:3) Sp even yr.

Taxonomy and ecology of wildland shrubs. Field trip required.

551. (Range-Botny) Quantitative Ecology. (3:2:3) W even yr. Prerequisite: Botny-Zool 350 or equivalent, Stat 222 or 501.

Methods of community analysis.

552. (Range-Botny) Terrestrial and Rangeland Ecosystems. (4:3:2) F even yr. Prerequisite: Botny-Zool 350 or equivalent, Stat 222 or 501.

Biotic communities of the earth; population dynamics; reproductive, life-form, and longevity patterns; species interactions; structure, dynamics, and evolution of communities.

561. Watershed Management. (3:2:3) F even yr. Prerequisite: Range-Zool 354 or equivalent.

Water-producing characteristics of forest and rangelands, emphasizing laboratory and field studies of soil and vegetation.

565. Wildlife Behavioral Ecology. (3:2:3) W even yr. Prerequisite: Biol 130, Range-Zool 354 or equivalents.

Integration of the principles of ethology, sociobiology, and behavioral ecology using examples from wildlife and livestock. Behavioral sampling methods stressed. Field trip required.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

691R. Graduate Seminar. (1:1:0 ea.)

697R. Special Problems. (1-6:Arr.:Arr. ea.)

699R. Master's Thesis. (1-9:Arr.:Arr. ea.)

799R. Doctoral Dissertation. (1-9:Arr.:Arr. ea.)

Bulgarian

See Germanic and Slavic Languages.

Business

See Management, J. Willard and Alice S. Marriott School of.

Canadian Studies

See Kennedy Center for International Studies, David M.

Cantonese

See Asian and Near Eastern Languages.

Career Education

See Student Development.

Central American Indian Languages

See Linguistics.

Chemical Engineering

See Engineering.

Chemistry

Earl M. Woolley, Chair (226 ESC)

Professors

Bills, James L. (1963) BS, U. of Utah, 1958; PhD, Massachusetts Inst. of Technology, 1963.
 Bradshaw, Jerald S. (1966) BS, U. of Utah, 1955; PhD, U. of California, Los Angeles, 1963.
 Cluff, Coran L. (1960) BS, Northern Arizona U., 1952; MS, PhD, U. of Michigan, 1955, 1961.
 Dalley, Nelson Kent (1968) BS, MS, Brigham Young U., 1960, 1964; PhD, U. of Texas, Austin, 1968.
 Eatough, Delbert J. (1971) BS, PhD, Brigham Young U., 1964, 1967.
 Grant, David M. (1986) BS, PhD, U. of Utah, 1954, 1958.
 Hansen, Lee Duane (1972) BS, PhD, Brigham Young U., 1962, 1965.
 Hawkins, Richard T. (1959) BA, Brigham Young U., 1951; PhD, U. of Illinois, 1959.
 Izatt, Reed M. (1956) BS, Utah State U., 1951; PhD, Pennsylvania State U., 1954.
 Lamb, John D. (1985) BS, PhD, Brigham Young U., 1971, 1978.
 Lee, Milton L. (1976) BA, U. of Utah, 1971; PhD, Indiana U., 1975.
 Mangelson, Nolan F. (1969) A.S., Snow Coll., 1959; B.S., Utah State U., 1961; MS, Brigham Young U., 1963; PhD, U. of California, Berkeley, 1967.
 Mangum, John Harvey (1963) BS, MS, Brigham Young U., 1957, 1959; PhD, U. of Washington, 1963.
 Nordmeyer, Francis R. (1972) BA, Wabash Coll., 1961; MA, Wesleyan U., 1964; PhD, Stanford U., 1967.
 Ott, J. Bevan, Associate Academic Vice President—Research and Graduate Studies (1960) BS, MS, Brigham Young U., 1955, 1956; PhD, U. of California, Berkeley, 1959.

Owen, Noel L. (1987) BS, U. of Wales, 1960; PhD, Cambridge U., England, 1964; D.Sc., U. of Wales, 1983.
 Paul, Edward G. (1965) BS, PhD, U. of Utah, 1958, 1962.
 Pugmire, Ronald J. (1986) BS, Idaho State U., 1959; PhD, U. of Utah, 1966.
 Robins, Morris J. (1986) BA, U. of Utah, 1961; PhD, Arizona State U., 1965.
 Smith, Marvin A. (1966) BS, Utah State U., 1960; MS, PhD, U. of Wisconsin, Madison, 1962, 1964.
 Snow, Richard L. (1957) BS, PhD, U. of Utah, 1953, 1957.
 Thorne, James M. (1966) BA, Utah State U., 1961; PhD, U. of California, Berkeley, 1966.
 Watt, Gerald D. (1989) BA, PhD, Brigham Young U., 1962, 1966.
 Wilson, Byron J. (1965) BS, Idaho State U., 1955; MA, Southern Illinois U. 1958; PhD, U. of Washington, 1961.
 Woolley, Earl M. (1970) BS, PhD, Brigham Young U., 1966, 1969.

Associate Professors

Boerio-Goates, Juliana (1981) BA, Seton Hill Coll., 1975; MS, PhD, U. of Michigan, 1977, 1979.
 Farnsworth, Paul B. (1981) BS, Brigham Young U., 1977; PhD, U. of Wisconsin, Madison, 1981.
 Fleming, Steven A. (1985) BS, U. of Utah, 1978; PhD, U. of Wisconsin, Madison, 1984.
 Goates, Steven R. (1981) BS, Brigham Young U., 1976; MS, PhD, U. of Michigan, 1977, 1981.
 Robertson, Donald Lee (1980) BS, Brigham Young U., 1972; PhD, Washington U., 1976.
 Shirts, Randall B. (1991) BS, Brigham Young U., 1972; AM, PhD, Harvard U., 1978, 1979.
 Zimmerman, S. Scott (1978) BS, Brigham Young U., 1969; PhD, Florida State U., 1973.

Assistant Professors

Rossiter, Bryant E. (1985) BS, Brigham Young U., 1977; PhD, Stanford U., 1981.
 Simmons, Daniel L. (1989) BS, MS, Brigham Young U., 1978, 1980; PhD, U. of Wisconsin, Madison, 1986.

Lecturers

Cannon, John Francis (1970) BS, PhD, Brigham Young U., 1965, 1969.
 Hinshaw, Barbara C. (1989) BA, Westminster Coll., 1966; MS, U. of Utah, 1969.

Emeriti

Banks, Willis M. (1966) BS, Brigham Young U., 1948; MS, Colorado Coll., 1967.
 Blackham, Angus Udell (1952) BA, Brigham Young U., 1949; MA, PhD, U. of Cincinnati, 1950, 1952.
 Broadbent, H. Smith (1946) BS, Brigham Young U., 1942; PhD, Iowa State U. of Science and Technology, 1946.
 Butler, Eliot A. (1956) BS, PhD, California Inst. of Technology, 1952, 1956.
 Castle, Raymond N. (1970) BS, U. of Idaho, 1939; MA, PhD, U. of Colorado, 1941, 1944.
 Goates, J. Rex (1947) BS, Brigham Young U., 1942; PhD, U. of Wisconsin, Madison, 1947.

Gubler, Clark J. (1958) BA, Brigham Young U., 1939; MA, Utah State U., 1941; PhD, U. of California, Berkeley, 1945.
 Hall, H. Tracy (1955) BS, MS, PhD, U. of Utah, 1942, 1943, 1948.
 Nelson, K. LeRoi (1956) BS, Utah State U., 1948; PhD, Purdue U., 1952.
 Swensen, Albert D. (1947) BA, MA, Brigham Young U., 1937, 1938; PhD, Louisiana State U., New Orleans, 1941.
 Vernon, Leo P. (1970) BA, Brigham Young U., 1948; PhD, Iowa State U. of Science and Technology, 1951.

Programs and Degrees

BS	Chemistry
BS	Biochemistry
BA	Chemistry
BS	Molecular Biology
(BS and BA degrees above may be obtained with Honors in the major and University Honors.)	
MS	Chemistry
MS	Biochemistry
PhD	Chemistry
PhD	Biochemistry

Graduates in chemistry obtain positions in virtually every industry, and those who have imagination and intellectual curiosity are in particular demand. Chemistry is also an excellent preprofessional course of study for those interested in medicine, dentistry, law, and business. The chemistry curriculum is both rigorous and intellectually rewarding.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

Required High School Preparation

Note: It is recommended that a student complete the following courses in high school:

3 units of English
 2 units of physical science, chemistry, and physics

Because mathematics provides the foundation for all work in the physical and mathematical sciences, particular attention is paid to high school preparation in this subject.

4 units of mathematics, consisting of 2.5 units of algebra, 1 unit of geometry, and 0.5 unit of trigonometry. This should qualify students to begin college mathematics with Math 112, analytic geometry and calculus.

To decide which mathematics course should be taken first, write to the Mathematics Department, 292 TMCB, and request a mathematics placement test.

Requirements and Suggestions for all Degree Programs in Chemistry

I. All students, especially freshmen and those transferring, should contact the Chemistry Department between March and August each year for advisement about efficient course scheduling and opportunities for student employment.

II. The final 10 hours of required chemistry credit must be taken at BYU.

III. No more than 3 hours of D credit in any of the majors (or the minor) in chemistry.

IV. Seniors should take RelC 491R and 492R (College of Physical and Mathematical Sciences).

V. It is recommended that Biol 130 be taken to fulfill the GE Biological Science core requirement.

Core Course Requirements for All Degree Programs in Chemistry Except Molecular Biology

I. Major courses: Chem 111H*, 112*, 226*, 227, 351, 352, 354*, 391†, 461, 464, 501.

II. Supporting courses: Math 112, 113, 343; CS 131 or ChEn 101; Phscs 121, 122, 214, 221. (Math 344 is recommended but not required.)

*Transfer students and those switching from other majors may substitute the sequence Chem 105, 106, 107, 223, 353 (2 hours), which they have previously completed, for 111H, 112, 226, 354, respectively, by special permission of the department so they can continue their progress without delay. In addition, Chem 111 and 107 may be substituted for Chem 111H.

†Chem 391 fills GE Advanced Writing requirement.

BS Chemistry

This is the preferred degree for chemistry majors (approved by the American Chemical Society) and those who desire an advanced degree (MS, PhD) in chemistry.

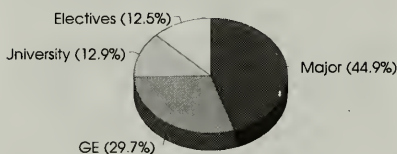
I. In addition to above core requirements: Chem 455, 462, 514, 523, 594R (1 hour), and an additional 6 credit hours of advanced study chosen after consultation with the department chair or assistant chair. Chem 481, 499R and any of the 500-series courses in chemistry qualify as advanced study, but only 3 hours of Chem 499R and/or 598R may be applied toward the 6-hour requirement. Honors chemistry majors should take 499R. Chem 481 is strongly recommended as an advanced study course. Physical chemistry (461, 462, 464) should be taken in the junior year because it is prerequisite to most 500-level chemistry classes.

On approval, certain other 300-level and above courses in the allied fields of physics, statistics, engineering, and biology may be taken as advanced study. Because of the

importance of biochemistry, polymer chemistry, and materials science, courses in those areas should receive serious consideration by chemistry students.

II. Elective courses, beyond requirements in item I above, should be selected in consultation with an advisor. The following should be given consideration: advanced chemistry, foreign languages (especially French, German, Japanese, and Russian), biological sciences, computer science, engineering, mathematics, physics, statistics.

Summary of Degree Requirements for BS Chemistry



1. Total hours	128.0
2. Major hours*	57.5
3. General Education requirements	38.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	16.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
Chem 111H, 112	4	3
Chem 226		3
Math 112**, 113	4	4
CS 131 or ChEn 101		2
Second Year		
Chem 351, 352	3	3
Chem 227, 354	3	2
Math 343	3	
Phscs 121, 122	3	3
Third Year		
Chem 455, 464	3	2
Chem 461, 462	3	3
Chem 501, 391	0.5	3
Phscs 221, 214	3	1

Fourth Year

Chem 523, 514	3	3
Chem 594R	0.5	0.5
RelC 491R, 492R	1	1
Advanced chemistry	3	3

**Those with inadequate high school preparation in mathematics will take Math 111 the first semester, and the mathematics series suggested here will be shifted back one semester.

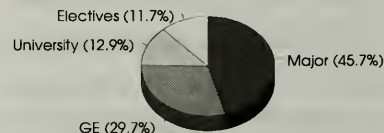
BS Biochemistry

Students preparing for health-related fields (medicine, dentistry, veterinary medicine) or those who desire an advanced degree (MS, PhD) in biochemistry, biology, or the health sciences receive excellent preparation from this degree program.

I. In addition to above core requirements: Chem 468, 481, 582, 584, 594R (1 hour); Biol 130, Zool 341, and 3 credits from any approved 400- or 500-series course in chemistry, botany, microbiology, or zoology. For Honors chemistry majors, Chem 499R should be part or all of the selection.

II. Supporting courses suggested by most medical and dental schools are found in the Preprofessional Programs section of this catalog. The more rigorous chemistry, mathematics, and physics courses required for the chemistry majors will satisfy the minimum requirements listed there. Elective courses in biochemistry and in biological science are especially pertinent to these preprofessional programs. Also see suggestions under BS Chemistry II.

Summary of Degree Requirements for BS Biochemistry



1. Total hours	128.0
2. Major hours*	59.5
3. General Education requirements	38.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	14.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer	

credits substantially increases the cost and the number of semesters to graduate.

♦ **Note:** Hours do not include any course that could be used to fill GE or university requirements.

BA Chemistry

This degree provides an excellent preparation for those individuals in preprofessional programs (e.g., medicine, dentistry, master of business administration, or law), and it also provides strong career alternatives in chemistry.

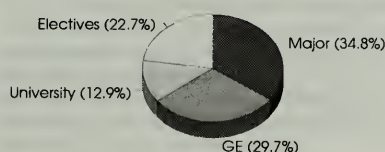
Students interested in secondary education chemistry teaching should complete the BA chemistry degree, which includes all of the fundamental core courses in chemistry but leaves enough flexibility to complete education requirements. There are abundant opportunities for chemistry teachers.

I. In addition to above core requirements: Chem 462 and 3 additional credits from 481, 499R, or any of the 500-series courses. For Honors chemistry majors, 499R should be part or all of the selection.

II. Supporting courses suggested by most medical and dental schools are found in the Preprofessional Programs section of this catalog. The more rigorous chemistry, mathematics, and physics courses required for the chemistry majors will satisfy the minimum requirements listed there. Elective courses in biochemistry and in biological science are especially pertinent to these preprofessional programs. Also see suggestions under BS Chemistry II.

III. See Chemistry in the Secondary Education section of this catalog for specific requirements for secondary school teaching.

Summary of Degree Requirements for BA Chemistry



1. Total hours	128.0
2. Major hours ♦	44.5
3. General Education requirements	38.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	29.0
6. 40 hours upper-division GPA requirement of 2.0	

- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦ **Note:** Hours do not include any course that could be used to fill GE or university requirements.

BS Molecular Biology

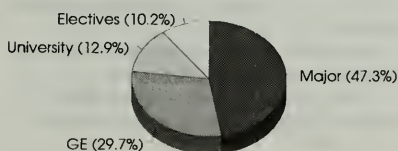
This degree represents an excellent preparation for the health-related fields of medicine, dentistry, and veterinary medicine, and for those who intend to pursue an advanced degree (MS, PhD) in biology, molecular biology, biochemistry, or the health sciences. The more rigorous chemistry, mathematics, and physics courses required for the chemistry majors will satisfy the minimum requirements listed in the Preprofessional Programs section of this catalog.

(A molecular biology degree is also offered by several of the life sciences departments based on a common core curriculum. The chemistry degree provides an excellent preparation in molecular biology because of its additional emphasis in chemistry and biochemistry, which are fundamental components of modern molecular biology.)

I. Course requirements for this degree include the molecular biology core with some substitutions (*) plus additional courses (**) to strengthen the fundamental chemistry: Chem 111H*, 112*, 223**, 351, 352, 354*, 367, 391**, 481, 501**, 582**, 584**, 586; Biol 130; Botny-Mcbio-Zool 341, 342; Mcbio 401, 441, 442; Math 112, 113; Phscs 121, 122, 221; CS 131** or ChEn 101**; and 3 additional credits from Chem 499R or any of the Chem 500-series courses.

II. Molecular biology students who desire a more extensive exposure to chemistry should consider the BS biochemistry degree, which requires extra analytical (Chem 226, 227, instead of 223) and physical (Chem 461, 468, instead of 367) chemistry, although fewer biology-oriented courses are required. Also see suggestions under BS Chemistry II.

Summary of Degree Requirements for BS Molecular Biology



1. Total hours	128.0
2. Major hours ♦	60.5
3. General Education requirements	38.0
Core	16.0
First-Year Writing	3.0

- | | |
|--|------|
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 4.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 13.0 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate <ul style="list-style-type: none"> 13 hours per semester 10.0 16 hours per semester 8.0 | |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

♦ **Note:** Hours do not include any course that could be used to fill GE or university requirements.

Degrees with Honors in the Major and University Honors

The BA and BS in chemistry and the BS in biochemistry or molecular biology can all be obtained with Honors in the major designation.

I. Honors Program requirements:

- The Honors two-semester History of Civilization sequence and the other Honors graduation requirements are listed in the Honors Education section of this catalog. It is preferred that the foreign language proficiency requirement be met in one of the following languages: German, Russian, French, or Japanese.
- General Education: Biol 100H or HonP 260 must be taken to fulfill the biological science core requirement, except in the biochemistry and molecular biology majors, which require Biol 130.

II. Honors major requirements: Students must make the following adjustments in the BA or BS major requirements outlined above:

- Additional courses: Hist 314 (also listed as Phil 314 and Phscs 314) or HonP 254R (when it is offered); RelC 491R, 492R (physical and mathematical sciences section).
- An Honors thesis based on a chemical research project and registration in Chem 499R. The thesis proposal must be approved by the department chair and the Honors Program Office. A research advisor, who is a member of the chemistry faculty, should be selected and the project should begin early in the junior year of study. An oral defense of the thesis is required. A paper written by the student and submitted to a scientific journal may be accepted in lieu of the thesis. The departmental Honors advisor will certify departmental approval for the thesis work at the oral defense. (Chem

499R may replace one optional 500-level course).

Students requesting exceptions to these requirements should contact the Chemistry Department (226 ESC).

Minor

Chem 111H, 112, 226 (or 105, 106, 107, 223), plus either of the following sequences: Chem 351, 352; 354 or 353 (2 hours); or 461, 462, 464.

When all of the chemistry credit required for a minor is transferred from another school, at least one course in chemistry must be taken at BYU with a grade of C or better—or the student may request to take a standardized national exam covering advanced material required for the minor. Chemistry programs at some schools have been evaluated and their credit is acceptable for the minor. No more than one course with a grade in the D range will be allowed.

Minor hours: 18–20

General Education

It is important for each chemistry major to contact the College of Physical and Mathematical Sciences Advisement Center to obtain recommendations for General Education courses.

Scholarships

Scholarships, including John Einar Anderson and Carl J. Christensen scholarships, are available to qualified chemistry majors.

Chemistry (Chem)

Undergraduate Courses

100. Elementary College Chemistry. (3:3:0) F, W, Sp Independent Study also. Recommended: Phys 100 or equivalent.

Structure of matter and the chemical consequences of that structure. For nonscience and nonmedical majors.

101. Introductory General Chemistry. (3:3:0) F, W, Sp, Su Prerequisite: Math 97 or equivalent.

Atomic and molecular structure, periodic relationships, states of matter, chemical reactions and stoichiometry, acids and bases. Primarily for nonscience majors who require a broad introduction to general chemistry.

103. Introductory Chemistry Laboratory. (1:0:3) W Prerequisite: Chem 101 or equivalent.

Introductory laboratory techniques required for simple classical experiments in chemistry. Fee.

105. General College Chemistry. (4:4:0) F, W, Sp, Su Prerequisite: Math 110 (or equivalent) or concurrent registration.

Atomic and molecular structure, periodic properties, states of matter, chemical bonding, stoichiometry, oxidation-reduction, kinetic-molecular theory, solutions and equilibria. Primarily for students in engineering and the biological sciences.

106. General College Chemistry. (3:3:0) F, W, Sp, Su Prerequisite: Chem 105 or equivalent. Continuation of Chem 105.

107. General College Chemistry Laboratory. (1:0:3) F, W, Sp, Su Prerequisite: Chem 106 or concurrent registration.

Chemical properties, chemical reactions, collection and interpretation of data, preparation of reports. Required for most students needing one year of general chemistry. Fee.

111. Principles of Chemistry. (3:4:0) F Prerequisite: Math 110 (or equivalent) or concurrent registration. Strongly recommended: high school chemistry and physics.

Taught simultaneously with Chem 111H but does not include laboratory. Stoichiometry, kinetic-molecular theory, thermodynamics, states of matter, solutions and equilibria, electrochemistry, structure and bonding, chemical reactions, kinetics.

111H. Honors Principles of Chemistry. (4:4:3) F Prerequisite: Math 110 (or equivalent) or concurrent registration. Strongly recommended: high school chemistry and physics.

Stoichiometry, kinetic-molecular theory, thermodynamics, states of matter, solutions and equilibria, electrochemistry, structure and bonding, chemical reactions, kinetics. For chemistry majors. Fee.

112. Principles of Chemistry. (3:4:0) W Prerequisite: Chem 111, 111H, or equivalent. Continuation of Chem 111 or 111H.

152. Introductory Organic Chemistry. (2:2:0) F, W, Sp, Su Prerequisite: Chem 101 or adequate high school preparation in chemistry.

Principles of structure and reactivity, properties and reactions of compound classes, syntheses.

181. Introductory Physiological Chemistry. (3:3:0) F, W, Sp, Su Prerequisite: Chem 152 or equivalent.

Relationships between chemical structure and physiological function, overall correlation of metabolism. Students with more extensive preparation should register for Chem 481.

223. Quantitative and Qualitative Analysis. (4:2:6) F, Sp Prerequisite: Chem 106 or equivalent.

Principles of chemical equilibrium, quantitative chemical measurements, and qualitative detection of selected chemical species. Primarily for majors in molecular biology and the life sciences. Others should take Chem 226. Fee.

226. Introductory Analytical Chemistry. (3:1:6) F, W Prerequisite: Chem 106 or concurrent registration in 112.

Principles and techniques of making precise chemical measurements, with application to quantitative and qualitative analysis. Fee.

227. Introductory Analytical Chemistry. (3:1:6) F, Sp Prerequisite: Chem 226, CS 131 or equivalent.

Continuation of Chem 226, plus introductory instrumental methods and computer applications. Fee.

284. Physiological Chemistry Laboratory. (2:0:6) On dem. Prerequisite: Chem 181 or equivalent.

Introductory physiological chemistry laboratory course for nonchemistry majors. Fee.

351. Organic Chemistry. (3:3:0) F, W, Sp Prerequisite: Chem 107 or 226 or equivalent.

Chemical bonds and molecular structure, conformation and configuration, functional classes, reactions and mechanisms, syntheses. Primarily for majors in chemistry, chemical engineering, and the biological sciences.

352. Organic Chemistry. (3:3:0) F, W, Sp, Su Prerequisite: Chem 351 or equivalent. Continuation of Chem 351.

353. Organic Chemistry Laboratory—Nonmajors. (1–2:0:6) F, W, Sp, Su Prerequisite: Chem 352 or concurrent registration.

Physical and chemical properties, isolation and purification, characterization, syntheses. For pre dentistry, premedicine, and other majors who do not intend to take Chem 455. Fee.

354. Organic Chemistry Laboratory—Majors. (2:0:6) F, W, Sp Prerequisite: Chem 352 or concurrent registration.

Physical and chemical properties, manipulative skills, isolation and purification, characterization and identification, syntheses. Fee.

367. Physical Chemistry for Molecular Biology. (3:3:0) Prerequisite: Chem 352, Math 113, Phscs 106 or 221.

Principles of chemical thermodynamics and kinetics with applications to biological systems; brief introduction to quantum mechanics and spectroscopy and to transport properties. For majors in molecular biology.

391. Chemical Literature. (3:3:0) W
Prerequisite: Chem 227, 352.

Intensive technical writing course based on chemical literature sources. Fulfills GE Advanced Writing requirement.

455. Synthesis and Qualitative Organic Analysis. (3:1:6) F Prerequisite: Chem 354; 501 or concurrent registration.

Laboratory course emphasizing isolation, purification, and characterization of major and minor products from selected syntheses. For chemistry and other science majors. Fee.

461. Physical Chemistry. (3:3:0) F, W
Prerequisite: Chem 223 or 226; Math 343, Phscs 221, or concurrent registration.

States of matter, thermodynamics and equilibria, kinetic-molecular theory, quantum mechanics, group theory, atomic and molecular structure, spectroscopy.

462. Physical Chemistry. (3:3:0) W, Sp
Prerequisite: Chem 461.

Continuation of Chem 461.

464. Physical Chemistry Laboratory. (2:0:6) F, W, Sp Prerequisite: Chem 227; 461, 501, or concurrent registration.

Precise data collection for classical experiments, computer manipulation of data, report preparation. Course may be continued for a second semester or term. Fee.

468. Biophysical Chemistry. (3:3:0) W
Prerequisite: Chem 461; 481 or concurrent registration.

Application of physical chemistry to biological systems. Thermodynamics, statistical mechanics, quantum mechanics, biophysical experimental techniques. For biochemistry (BS) majors and those interested in the health professions or biochemistry.

481. Biochemistry. (4:4:0) F, W, Sp
Prerequisite: Chem 352 or equivalent.

First-semester biochemistry. Molecular components of cells, chemical structure and function, enzymes, metabolic transformations, photosynthesis. For chemistry majors or students in biological sciences who contemplate pursuing advanced degrees, including medicine.

499R. Honors Thesis. (1–6:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: Chem 501 or concurrent registration; instructor's consent.

Advanced Undergraduate or Graduate Courses

501. Chemical Handling and Safe Laboratory Practices. (0.5:0.5:0) F, Sp

Survey of appropriate methods in handling hazardous materials and disposing of waste; legal rights and requirements; safety in chemistry laboratory work.

514. Inorganic Chemistry. (3:3:0) W
Prerequisite: Chem 462 or 468.

In-depth treatment of theoretical concepts in inorganic chemistry and the descriptive chemistry of some of the elements.

518. Inorganic Synthesis. (2:0:6) On dem.
Prerequisite: Chem 501 or concurrent registration; 514.

Syntheses that demonstrate a variety of techniques and a range of inorganic materials.

522. Chemical Instrumentation. (3:2:4) On dem.
Prerequisite: Chem 227.

Introduction to analog and digital circuits, including computer architecture; provides basis for understanding computer control of modern chemical instrumentation.

523. Instrumental Analysis. (3:1:6) F
Prerequisite: Chem 464, 501, or concurrent registration.

Modern instrumental methods and basic principles of instrumentation. Laboratory experience with a variety of instruments. Fee.

524. Analytical Chemistry. (2:2:0)
Prerequisite: Chem 523.

Advanced theory of measurements and techniques in chemical analysis.

552. Advanced Organic Chemistry. (3:3:0) F
Prerequisite: Chem 351, 352, 461, 462.

Physical aspects of organic chemistry; mechanisms, reaction intermediates, bonding, stereochemical and stereoelectronic effects, molecular orbital theory, Lewis acidity and basicity.

553. Advanced Organic Chemistry. (3:3:0) W
Prerequisite: Chem 351, 352.

Synthetic aspects of organic chemistry; oxidations, reductions, concerted reactions, stereoselectivity, synthetic equivalents, protecting groups. Examples of natural product total synthesis.

561. Chemical Thermodynamics. (3:3:0) F
Prerequisite: Chem 462.

Development of the principles of chemical thermodynamics, including laws, pure materials, mixtures, equilibria, and elementary statistical mechanics.

563. Reaction Kinetics. (3:3:0) W alt. yr.
Prerequisite: Chem 462.

Theoretical aspects of chemical kinetics in the gas phase and in solution. Rates and mechanisms in solution, rapid reactions, and other topics.

564. Nuclear Chemistry and Radiochemistry. (2–3:3:0) W alt. yr.
Prerequisite: Chem 462.

Introduction to nuclear structure, radioactivity, nuclear spectroscopy, and nuclear reactions, emphasizing applications in chemistry.

565. Introduction to Quantum Chemistry. (3:3:0) F Prerequisite: Chem 462.

Introduction to physical and mathematical aspects of quantum theory, emphasizing application of the Schrodinger wave equation to chemical systems.

569. Fundamentals of Spectroscopy. (3:3:0) W Prerequisite: Chem 462 or 468; 523.

Atomic and molecular spectroscopy and application of group theoretical concepts. Types of experiments and interpretation of data.

582. Biochemistry of the Nucleic Acids. (3:3:0) W Prerequisite: Chem 481.

Second-semester biochemistry. Nucleic acid biochemistry and molecular biology: nucleotide metabolism, chromosome and chromatin structure, DNA structure and replication, RNA transcription and gene expression, protein synthesis regulation, eukaryotic gene systems.

584. Biochemistry Lab. (2:0:6) W
Prerequisite: Chem 481.

Modern research instrumentation and current biochemical research procedures. Enzyme isolation and characterization, protein sequencing, nucleic acid manipulations. Fee.

585R. Biochemistry Seminar. (0.5–1:1:0 ea.) F, W

Current topics discussed by guests, faculty, and graduate students. Required of graduate students in biochemistry each semester in residence.

586. Recombinant DNA. (2:0:6) W
Prerequisite: Chem 481.

Laboratory course covering major techniques involved in isolation, amplification, and cloning of recombinant DNA. Variety of cloning systems and methods of identification introduced. Fee.

594R. General Seminar. (0.5:1:0 ea.) F, W

Research topics presented by faculty and visiting scientists. Required every semester in residence of all senior BS majors and graduate students in chemistry and biochemistry.

598R. Special Problems. (1–6:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: Chem 501 or concurrent registration and instructor's consent.

Undergraduate research experience emphasizing student development.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

619R. Advanced Topics in Inorganic Chemistry. (3:3:0 ea.)

629R. Advanced Topics in Analytical Chemistry. (3:3:0 ea.)

659R. Advanced Topics in Organic Chemistry. (3:3:0 ea.)

669R. Advanced Topics in Physical Chemistry. (2–3:3:0 ea.)

689R. Advanced Topics in Biochemistry. (1–3:3:0 ea.)

697R. Master's Candidate Research.
(1-6:Arr.:Arr. ea.)

699R. Master's Thesis. (1-9:Arr.:Arr. ea.)

719R. Selected Topics in Inorganic
Chemistry. (1-3:3:0 ea.)

729R. Selected Topics in Analytical
Chemistry. (1-3:3:0 ea.)

759R. Selected Topics in Organic Chemistry.
(1-3:3:0 ea.)

769R. Selected Topics in Physical
Chemistry. (1-3:3:0 ea.)

789R. Selected Topics in Biochemistry.
(1-3:3:0 ea.)

797R. Doctoral Candidate Research.
(1-9:Arr.:Arr. ea.)

799R. Doctoral Dissertation. (1-9:Arr.:Arr. ea.)

Chinese

See Asian and Near Eastern Languages.

Church History and Doctrine

See Religious Education in Academic
Departments, Degrees, and Courses section
in this catalog.

Civil Engineering

See Engineering.

Classical Civilization

See Humanities, Classics, and Comparative
Literature.

Classical Studies or Classics

See Humanities, Classics, and Comparative
Literature.

Clothing and Textiles

Marvin C. J. Kuchar, Chair (3256 SFLC)

Associate Professors

Kuchar, Marvin C. J. (1979) AA, Eastern
Arizona Coll., 1955; BS, PhD, Brigham
Young U., 1957, 1963.

Lind, Charlene (1964) BS, Utah State U., 1955;
MA, U. of Maryland, College Park, 1961;
PhD, U. of Wisconsin, Madison, 1974.

Steineckert, Della N. (1970) BS, Brigham
Young U., 1954; MA, Adams State Coll. of
Colorado, 1963; PhD, Florida State U., 1976.

Assistant Professor

Farahnakian, Mary (1988) BA, U. of Tehran,
Iran, 1971; PhD, Brigham Young U., 1977.

Instructor

Thompson, Mary J. (1974) BS, Brigham
Young U., 1961; MA, Washington State U.,
1974.

Emeriti

Childs, Margaret S. (1946) BS, Brigham Young
U., 1939; MS, Oregon State U., 1949.

Jorgensen, Eleanor (1949) BS, Brigham Young
U., 1946; MS, Kansas State U., 1954; PhD,
Texas Woman's U., 1965.

Lee, Evelyn Monson (1962) BS, MS, Montana
State U., 1952, 1959.

Liechty, Elizabeth L. (1952) BS, Utah State U.,
1948; MS, U. of California, Los Angeles,
1954.

Thackeray, Renee (1973) BS, Brigham Young
U., 1953; MS, Oregon State U., 1960.

Wright, Doris Lewis (1976) BS, Brigham
Young U., 1973; MS, Utah State U., 1977.

Special Instructors

Donna Baugh, Jerry Christopherson, Wendy
Copus, Judith Eatough, Sally Fails, Lula
Henriksen, Michelle Hyde, Sue Lammersen,
Jean Nicoll, Marlene Rosen, Linda Wilkinson

Programs and Degrees

BS	Fashion Merchandising
BA	Fashion Design
BS	Clothing and Textiles

The clothing and textiles curriculum
provides preparation for careers in fashion
merchandising, fashion design, apparel
production, entrepreneurship, textile arts,
and graduate work.

Program Requirements

Core Requirements for All Degree Programs in Clothing and Textiles

I. Major core courses: CITx 101, 110, 260, 300,
490.

II. Transfer students must complete at least
12 credit hours of work in this department
to qualify for graduation.

III. Students must maintain an overall GPA
of at least 2.0 with no hours of D credit in
any course required in the major.

IV. Writing policy: The Clothing and
Textiles Department requires that all
proposals, papers, reports, summaries, etc.,
submitted by students for class work or to
the department be typed. Any exceptions
will be noted in the course outline or by the
instructor. "Standards for Student Papers,"
a publication of Brigham Young University,
may be used as a reference for maintaining
high writing quality.

BS Fashion Merchandising

The course work offered in this major
provides specialized training for positions
such as buyer, assistant buyer, store manager,
fashion coordinator, and fashion promoter.

I. In addition to above core requirements:
CITx 272, 360, 372, 473, 474 and two clothing
and textiles electives.

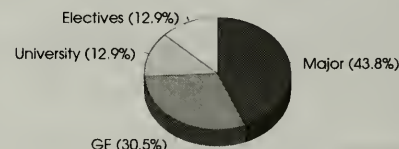
II. Supporting courses: Econ 110, Comms
150, Acc 200; BusM 340, 456; OrgB 320; TecE
270.

III. Recommended: Chem 100, Comms 101,
OrgB 372.

Note: Internship candidates must take
BusM 340, 456.

IV. Either Psych 111 or Soc 111.

Summary of Degree Requirements for BS Fashion Merchandising



1. Total hours	128.0
2. Major hours*	56.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign	
Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	16.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BA Fashion Design

This program provides training for positions in apparel design or theatrical costume design, including fashion illustration.

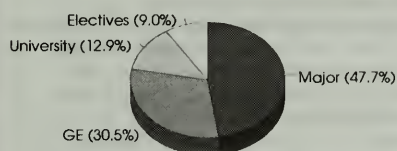
Apparel Design Emphasis

I. In addition to above core requirements: CITx 115, 140, 145, 245, 250, 255, 330, 340, 345, 350, 440, 450.

II. Supporting courses: Three courses from Art 120, 211, 212, 213, 333R, 353R.

III. Electives: Three courses from CITx 235, 321, 335, 355, 365, 395, 415, 430, 545, 599R.

Summary of Degree Requirements for Apparel Design Emphasis



- Total hours 128.0
- Major hours♦ 61.0
- General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
- University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- Elective hours 11.5
- 40 hours upper-division GPA requirement of 2.0
- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

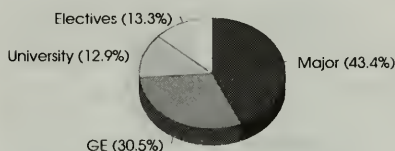
Theatrical Costume Design Emphasis

I. In addition to above core requirements: CITx 115, 140, 145, 245, 255, 330, 340, 345, 415, 430, 545.

II. Supporting courses: ThF 127R, 362, 562, Art 120.

III. Three courses from ThF 115, 200, 201, 220, 327R, 462, 544R, Art 333R, 353R, CITx 250, 335, 355.

Summary of Degree Requirements for Theatrical Costume Design Emphasis



- Total hours 128.0
- Major hours♦ 55.5
- General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
- University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- Elective hours 17.0
- 40 hours upper-division GPA requirement of 2.0
- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

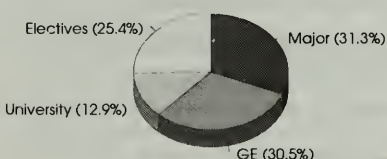
Textile Arts Emphasis

I. Major courses (in addition to core courses): CITx 115, 140, 145, 245, 250, 321, 323, 340, 421, 422, 430.

II. Supporting courses: Art 106, 111, 119, 206R, and two courses from Art 109; Des 110; TecE 250, 354.

III. Recommended: Chem 100, CITx 330, 345, 350, 365, 440.

Summary of Degree Requirements for Textile Arts Emphasis



- Total hours 128.0
- Major hours♦ 40.0
- General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
- University requirements 16.5

- Religion 14.0
- PE/Health 2.5
- Elective hours 32.5
- 40 hours upper-division GPA requirement of 2.0
- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Clothing and Textiles

This program prepares students for several clothing and textile professions.

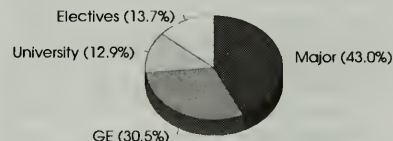
Emphasis A. Apparel Production (Sample Maker, Grader, Pattern Maker)

I. Major courses (in addition to core courses): 32 or more hours from CITx 115, 145, 235, 245, 255, 272, 330, 335, 345, 360, 365; 6 or more hours from CITx 140, 340, 355, 372, 430, 440, 450.

II. Supporting courses: OrgB 320 or 347; Acc 200; TecE 270.

III. Recommended: Chem 100, Art 103.

Summary of Degree Requirements for Apparel Production Emphasis



- Total hours 128.0
- Major hours♦ 55.0
- General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
- University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- Elective hours 17.5
- 40 hours upper-division GPA requirement of 2.0
- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

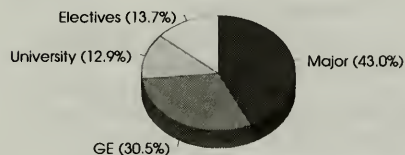
Emphasis B. Self-employment (*Couture Sewing, Fashion Consulting, Alterations, Private Teaching*)

I. Major courses (in addition to core courses): 26 or more hours from CITx 115, 145, 235, 245, 255, 335, 345, 355, 365, 372, 395; 9 or more hours from CITx 272, 321, 330, 360, 415, 430, 473.

II. Supporting courses: two courses from Acc 200, BusM 300, or ManEc 300; TecE 270.

III. Recommended: Chem 100, Art 103.

Summary of Degree Requirements for Self-employment Emphasis



- | | |
|--|-------|
| 1. Total hours | 128.0 |
| 2. Major hours* | 55.0 |
| 3. General Education requirements | 39.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 6.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 17.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

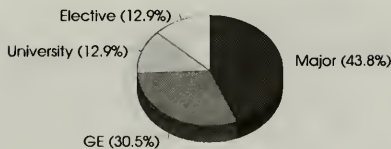
*Note: Hours do not include any course that could be used to fill GE or university requirements.

Emphasis C. University Teaching (*Preparation for Entering Graduate Training, Adult Education, Research*)

I. Major courses (in addition to core courses): 33 or more hours from CITx 115, 140, 145, 235, 245, 255, 272, 321, 330, 360, 372, 430, 473.

II. Supporting courses: Chem 100; OrgB 320 or 347; TecE 270.

Summary of Degree Requirements for University Teaching Emphasis



- | | |
|--|-------|
| 1. Total hours | 128.0 |
| 2. Major hours* | 56.0 |
| 3. General Education requirements | 39.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 6.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 16.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

*Note: Hours do not include any course that could be used to fill GE or university requirements.

General Clothing Minor

Students who choose clothing and textiles as their minor field of study must complete 14 credit hours (5 at BYU) with no D credit and at least one course in three of the four following areas:

Construction: CITx 115, 235, 255, 272, 335, 355, 365, 435, 520R.

Design and selection: CITx 110, 140, 145, 250, 300, 321, 340, 345, 350, 415.

History and economics: CITx 330, 372, 430, 473, 474, 599R.

Textiles: CITx 260, 360, 595R.

Cougar Custom Sewing

Sponsored by the department, Cougar Custom Sewing provides employment opportunities and practical experience in the design and construction of apparel for others. Those students whose major option involves clothing are strongly advised to seek employment at Cougar Custom Sewing for at least one semester. Employees are selected on the basis of their performance in clothing construction and design classes.

Clothing and Textiles (CITx)

Undergraduate Courses

101. Careers in Clothing and Textiles. (1:1:0) F, W
Career opportunities in clothing and textiles.

105. Elementary Clothing Construction. (2:1:3) F, W, Sp, Su
Unit method of clothing construction applied to simply designed apparel. For nonmajors with little or no sewing experience. Student-supplied materials required.

110. Principles of Fashion Selection. (3:2:2) F, W, Sp, Su
Coordination of art principles and elements with apparel planning and buying; application to men and women. Lab required.

115. Intermediate Construction Skill-building Techniques. (3:3:2) F, W, Sp, Su
Recommended: CITx 105 or equivalent.
Methods to increase construction and decision-making skills. Student-supplied materials. Required of all clothing and textiles majors except nonconstruction merchandising majors.

135. Clothing Construction for Nonmajors. (2:1:3) F, W
Prerequisite: CITx 105 or equivalent experience.

Construction techniques for a variety of fabrics. Choice of projects adapted to student's experience. Student-supplied materials required.

140. Fashion Drawing. (2:1:2) F, W
Line drawings of fashion figures; principles of design in relation to figure drawing; beginning of morgue collection.

145. Basic Flat Pattern Design. (2:2:1) F, W
Independent Study also. Prerequisite: previous experience in clothing construction. Recommended: CITx 115.

Dress design and pattern making from a basic sloper.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) F, W, Sp, Su
Prerequisite: approval of faculty advisor and department chair.

Work experience evaluated by supervisor and posted on student transcript.

235. Children's Clothing. (2:1:3) F
Prerequisite: CITx 105; 115 or 135 or equivalent experience. Recommended: CITx 145.

Selection, design, and construction of children's clothing (infancy to twelve years of age).

245. Intermediate Flat Pattern Design. (3:2:4) F
Prerequisite: CITx 115, 145.

Intermediate flat pattern design with standard slopers. Student-supplied materials required.

250. Apparel Design. (3:2:4) F Prerequisite: CITx 110, 140, 145.

Application of various sources of inspiration in clothing design; interpretation of style trends and market research.

255. Fitting and Intermediate Construction. (3:2:4) F, W, Sp even yr., Su odd yr. Prerequisite: CITx 115.

Basic fitting of dresses and pants. Construction techniques for bulky and other challenging fabrics. Student-supplied materials required.

260. Textiles. (3:3:2) F, W, Sp, Su Independent Study also.

Natural and synthetic textile fibers, yarns, fabric construction, dyes, and finishes; application to use and performance of textile fabrics. Fee. Lab required.

272. Apparel Evaluation. (3:3:0) F, W, Sp odd yr. Prerequisite: CITx 110, 260.

Evaluation of commercial construction techniques. Garment cost, durability, appearance, and quality.

300. Clothing and Human Behavior. (3:3:0) F, W, Sp odd yr. Prerequisite: 3 hours of social and behavioral science courses. Recommended: Engl 315 or 316.

Clothing needs of family members through the life cycle from physical, social, psychological, economic, and cultural viewpoints.

321. Weaving. (3:1:4) F, W Recommended: CITx 110.

Creative design applied to weaving methods for both floor looms and simple looms. Lab and student-supplied materials required.

323. Surface Pattern Application. (3:2:4) W Prerequisite: CITx 250, 260, Des 111, 119.

Design of printed fabrics with emphasis on women's, men's, and children's apparel. Methods of designing, croquis, repeats, and color combinations using dyes and various media.

330. History of Costume. (3:3:0) F, W

Social, economic, and political influences on dress through the ages. Costume as an expression of life-style and as a basis for interpreting modern fashions.

335. Specialty Techniques. (2:1:3) F, W Prerequisite: CITx 110, 115, 255, 260. Recommended: CITx 235.

Advanced construction techniques as used in custom/couture dressmaking. Student-supplied materials required.

340. Fashion Illustration. (3:1:3) F, W Prerequisite: CITx 140.

Clothing and accessories layout, design, and rendering for advertising and selling designs and fashions.

345. Draping. (3:2:4) W Prerequisite: CITx 110, 245, 255, 260. Recommended: CITx 330.

Creative design achieved through techniques of draping on a standardized dress form. Student-supplied materials required.

350. Intermediate Apparel Design. (3:2:4) W Prerequisite: CITx 245, 250, 330, 340.

Creative experiences in apparel design for different production processes and price levels. Student-supplied materials required.

355. Tailoring. (3:2:4) F, W Prerequisite: CITx 115, 255, and junior standing.

Contemporary techniques applied to men's and women's suits and coats. Student-supplied materials required.

360. Textile Evaluation. (3:2:2) F, W, Sp Prerequisite: CITx 260, Engl 315, 316, or MCom 320.

Standard procedures of textile performance testing.

365. Mass Production Techniques. (2:1:4) Sp odd yr. Prerequisite: CITx 110, 115, 145, 255.

Manufacturing processes for the production of apparel; pattern designing and grading, production planning, pricing, cutting, and construction.

372. Fashion Industry. (3:3:1) F, W, Sp odd yr. Prerequisite: junior standing.

Relation of fashion movement to manufacture and consumption of clothing, garment production, fashion designers, fashion cycles, and trade organizations.

395. Introduction to Shop Management. (2:2:2) On dem. Prerequisite: departmental approval.

Development of management skills for custom sewing.

415. Specialty Costume Design. (3:1:5) F Prerequisite: CITx 145.

Research and application of costume construction for dance, opera, commedia del arte, Oriental theatre, and musical variety shows.

421R. Weaving Studio. (2:1:2 ea.) F, W Prerequisite: CITx 321 and departmental approval.

Individualized skill development in selected weaving techniques. Student-supplied materials required.

422. Textile Structures. (3:2:4) F Prerequisite: CITx 250, 260, 321.

Woven textile design of apparel fabrics. Color, texture, pattern, and structure of woven cloth as they relate to drape and styling of garment.

430. Historic Textiles. (3:3:0) W Textile techniques and designs used by various societies, ancient to contemporary.

440. Advanced Fashion Illustration. (1:1:3) W Prerequisite: CITx 340, 350. Recommended: CITx 450.

Development of fashion illustration skills and individual portfolios.

450. Advanced Apparel Design. (3:2:4) F Prerequisite: CITx 335, 345, 350.

Design and creation of an original line for ready-to-wear through flat pattern and draping methods. Student-supplied materials required.

473. Clothing and Textiles Merchandising 1. (3:3:0) F, W, Sp Prerequisite: CITx 260, 372, Acc 200, BusM 340, Econ 110.

Processes of planning and operating merchandising divisions in fashion retail stores.

474. Clothing and Textiles Merchandising 2. (3:3:0) F, W Prerequisite: CITx 372. Recommended: CITx 110, 115; 255 or 272; 360.

Quality comparison of apparel, household textiles, and related merchandise available for retail selling. Aids in buying and selling.

490. Senior Seminar. (1:1:0) F, W, Sp, Su Prerequisite: senior standing and 12 credit hours in major; Engl 315, 316; or MCom 320.

Reports and readings from current professional journals.

Advanced Undergraduate or Graduate Courses

520R. Workshop in Clothing and Textiles. (1-3:Arr.:Arr. ea.) On dem. Prerequisite: instructor's consent.

545. Period Pattern Making. (3:1:4) W Prerequisite: CITx 145, 330, and instructor's consent.

Applying costume history and pattern making to period fashions. Hands-on experience in actual costume construction for theatre productions.

595R. Special Topics in Clothing and Textiles. (1-3:Arr.:Arr. ea.) Prerequisite: 15 semester hours in clothing and textiles and instructor's consent.

599R. Merchandising Internship. (3:Arr.:Arr. ea.) Prerequisite: CITx 110; 255 or 272; 260, 372, 473, Acc 200, BusM 340, 456, Comms 101, Econ 110, OrgB 320, and departmental approval.

Fifteen-week full-time work experience fulfilling specific training assignments. Recommended elective for students in fashion merchandising. Design prerequisite: CITx 260, 330, 365, 435, 450, and departmental approval.

Communications

David P. Forsyth, Chair (E-509 HFAC)

Professors

Barney, Ralph D. (1971) BS, Brigham Young U., 1957; MA, U. of Iowa, 1960; PhD, U. of Missouri, 1971.

Burnett, M. Dallas, Associate Dean (1958) BS, Brigham Young U., 1954; MSJ, PhD, Northwestern U., 1958, 1967.

Forsyth, David P. (1990) BS, Brigham Young U., 1954; MSJ, PhD, Northwestern U., 1958, 1962.

Gibb, J. Douglas (1969) BS, MA, U. of Utah, 1963, 1964; PhD, Wayne State U., 1966.

Goodman, R. Irwin (1962) BA, U. of California, Los Angeles, 1955; MS, EdD, Indiana U. East, 1961, 1969.

Hainsworth, Brad E. (1984) BA, MA, PhD, U. of Utah, 1963, 1966, 1968.

Hughes, John R. (1991)

Martin, Dennis G. (1977) BA, Brigham Young U., 1967; MS, Northwestern U., 1968; PhD, U. of Illinois, 1985.

Pratte, Paul Alfred (1984) BS, MA, Brigham Young U., 1962, 1967; PhD, U. of Hawaii, 1976.

Tarbox, Norman C. (1960) BS, U. of Utah, 1955; MS, Syracuse U., 1956; PhD, U. of Utah, 1979.

Valenti, Jo Ann M. (1992) BSJ, MA, U. of Florida, 1967, 1969; PhD, U. of Michigan, 1983.

Whiting, Gordon C. (1974) BA, U. of Minnesota, 1959; MA, U. of Utah, 1961; PhD, Michigan State U., 1967.

Associate Professors

Bartlett, Leonard L. (1987) BA, MA, Brigham Young U., 1957, 1989.

Egan, Kathryn S. (1986) BA, U. of Utah, 1964; MSJ, Northwestern U., 1965; PhD, U. of Southern California, 1972.

Gale, Larrie Eldon (1977) BA, MA, San Diego State U., 1967, 1970; PhD, U. of Utah, 1973.

Kagel, Richard I. (1973) BA, Brigham Young U., 1968; MA, Fairfield U., 1973; PhD, Columbia Pacific U., 1980.

Mouritsen, Russell H. (1982) BA, Brigham Young U., 1969; MEd, PhD, U. of Utah, 1971, 1980.

Nelson, Jack Adolph (1977) BA, Brigham Young U., 1954; MA, U. of Utah, 1964; PhD, U. of Missouri, 1971.

Porter, William C. (1972) BA, Brigham Young U., 1961; MA, U. of California, Los Angeles, 1963; EdD, Oklahoma State U., 1985.

Assistant Professors

Griffiths, Thomas A. (1974) BA, MA, Brigham Young U., 1968, 1976; PhD, U. of Utah, 1992.

Paystrup, Patricia (1993) BA, MA, Brigham Young U., 1974, 1976.

Wilson, Laurie (1989) BA, MA, Brigham Young U., 1980, 1982; PhD, American U., 1988.

Instructor

Stout, Daniel A., Jr. (1985) BA, Brigham Young U., 1979; MA, U. of Georgia, 1984.

Adjunct Faculty

Anthony L. Antin, Rodger D. Duncan, Elmer Lower, Arch L. Madsen, Bruce L. Olsen

Lecturers/Administrators

John Gholdston, Harlan Harrison, Stanley Michelsen, Robert Sink, JoLynne Van Valkenburg

Special Lecturer

Allen Palmer

Lecturers

Ron Clark, Norma Collette, Val Hale, Ted C. Hindmarsh, R. Bruce Reed, R. Melvin Rogers, B. William Silcock, Phil Skousen

Emeriti

Anderson, Stephen J. (1963) BA, MA, Brigham Young U., 1959, 1967.

Barrus, George S. (1967) BS, U. of Utah, 1950; MA, Brigham Young U., 1964; PhD, U. of Iowa, 1969.

Bateman, J. La Var (1949) BA, Brigham Young U., 1941; MS, PhD, U. of Wisconsin, Madison, 1947, 1950.

Beckham, Raymond E. (1949) BS, MA, Brigham Young U., 1949, 1969; PhD, Southern Illinois U., 1972.

Butterworth, Edwin (1949) BA, U. of Utah, 1950; MA, Brigham Young U., 1954.

Haroldsen, Edwin O. (1969) BS, MS, U. of Utah, 1943, 1956; PhD, Iowa State U. of Science and Technology, 1967.

Jerome, Emerald A. (1971) BS, U. of Wisconsin, Madison, 1950; MA, Brigham Young U., 1971.

McKinlay, Lynn A. (1955) MA, Utah State U., 1974.

Rich, Owen S. (1950) BS, Brigham Young U., 1950; MA, U. of Southern California, 1953; EdD, Pennsylvania State U., 1963.

Richards, J. Morris (1965) BA, Arizona State Coll., 1929; MA, U. of Arizona, 1937.

Richardson, Jed J. (1955) BS, MS, Utah State U., 1950, 1955.

Wolsey, Heber G. (1963) BS, Brigham Young U., 1942; MA, Northwestern U., 1949; PhD, Michigan State U., 1967.

Programs and Degrees

BA	Advertising
BA	Broadcast Communication
BA	Communication Studies
BA	Journalism Education
BA	Journalism
BA	Public Relations
BA	Honors in Communications and University Honors
MA	Communications

The Department of Communications provides a broad-based 21-hour concentration of core classes in the theory and principles of interpersonal and mass communications and four 17-hour blocks of courses in specialized areas: advertising, broadcasting, journalism, and public relations. Students who major in these four speciality areas are usually preparing for careers in the mass media industry. However, the department's communications studies program and the program in journalism education offer students a broader view of communications

in preparation for graduate study or careers in secondary teaching. For information about the journalism education major, see Journalism Education (Communications) in the Secondary Education section of this catalog.

It is the philosophy of the department that all students should have a basic understanding of the human communication process, a grasp of the role and functions of communication in society, requisite levels of skill in writing for mass communication, sensitivity to media ethical issues, and a fundamental understanding of research before they embark on a professional specialization.

It is the further philosophy and policy of the department that all majors must complete a minimum of 90 semester hours of course work outside the department. At least 65 hours of this must be in the liberal arts and sciences. Students should concentrate their efforts outside the department in a few subject areas. They should seek reasonable coherence and focus rather than a random scattering of effort. Most of a student's General Education and religion credits will count as part of the liberal arts total.

Working under faculty direction, students in the department publish the *Daily Universe* as a laboratory newspaper for the campus, produce daily radio and television newscasts on KBYU-FM and KBYU-TV, plan advertising and public relations campaigns for commercial clients, grapple with corporate-image problems of industrial firms, and produce sound and visual media for readers and viewers.

The Department of Communications sponsors the International Media Studies Program, which seeks to broaden students' awareness of worldwide communications issues and practices. Not only do students have opportunity to study the media systems of other nations through classes and through on-site experiences, media practitioners of other nations are brought to campus as lecturers and visiting experts. International Media Studies is directed by John Hughes, Pulitzer Prize-winning journalist and former publisher of the *Christian Science Monitor*.

Those choosing to major in communications should decide early, be aware of all the requirements, plan their schedules carefully, and stay informed about any changes by checking often with the College of Fine Arts and Communications Advisement Center (D-444 HFAC). Since much of the focused content of a given program does not overlap with the focused content of other programs in the department, attempts to change programs will delay graduation.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Communications

I. Students wishing to major in the Department of Communications must be formally accepted into one of the department's programs after having completed certain prerequisites. See the *College of Fine Arts and Communications Advisement Center (D-444 HFAC)* for details. Only accepted majors are admitted to most upper-division courses.

II. All programs require students, including those who have received high school advanced-placement credit, to take a campus writing class before applying for admission to a departmental major. The following writing classes fill this requirement: English 115, College Writing and Reading; Philosophy 105, Reasoning and Writing; or Honors 200, Intensive Writing. All majors are required to take 12 hours of classes in the Department of English as part of a supporting area outside the Communications Department. Some programs require other out-of-department supporting-area courses. In all cases, a faculty advisor must approve the supporting-area program. All students must complete 90 hours outside the department, of which at least 65 hours must be in the liberal arts and sciences.

III. Departmental required courses (20 hours and a 1-credit internship; see section IV): Comms 101, 201, 307, 311, 391, 461R (four semesters), 480, and one of Comms 310, 501, 510, 580, or 581. See *Communications Studies* for exception.

IV. Internship* (Comms 199R). Students must be majors and meet prerequisite requirements. Every student is required to serve an internship. Although the department operates an internship office (F-321 HFAC) that serves as a clearinghouse for internship information, the responsibility for securing an internship rests with the student. However, students should not embark on any internship without prior approval from a faculty advisor, before processing appropriate documents with the Communications Department Office (E-509 HFAC), and without being enrolled in Comms 199R.

*The internship requirement is waived for journalism education and communication studies.

V. Stat 105, 221, or 222.

VI. For communications majors, no D credit in communications or approved supporting courses will count toward graduation.

BA Advertising

This field provides career opportunities in advertising, related fields, and advertising

media sales as well as in its creative, research, media planning, and management functions. Only students officially accepted into the advertising program are allowed to register for 300- and 400-level courses in this program. Comms 307 and 461R are exceptions to this rule.

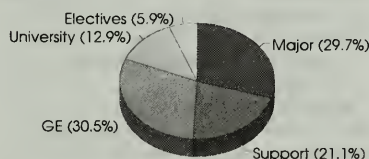
I. In addition to department core requirements: Comms 230; 330 or 334; 332, 344, 432, 439 (17 hours). Students wishing to serve promotion or sales internships with the *Daily Universe* must complete Comms 334, 344.

II. Required supporting courses (9 hours): MCom 320; Stat 105, 221, or 222; BusM 340.

III. Required minor: Students electing the advertising management track must complete a minor in business management. Students electing the advertising creative track must complete a minor in English.

These courses must be approved through the College of Fine Arts and Communications Advisement Center (D-444 HFAC) and a faculty advisor.

Summary of Degree Requirements for BA Advertising



1. Total hours 128.0
2. Major (communications credit only)* 38.0
3. Communications support outside department* 27.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
6. Elective hours 7.5
7. 40 hours upper-division GPA requirement of 2.0
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA Broadcast Communication

Careers in programming and research, broadcast account development, broadcast

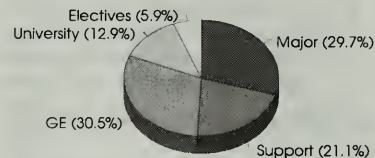
news, message development and research, production, and the management of these functions are typically sought by those in this major. Only those accepted into the broadcast communication program are allowed to register for most broadcast courses (see the Fine Arts and Communications Advisement Center for details). Comms 307 and 461R are exceptions to this rule. Students who desire to gain on-air experience with KBYU-TV News must complete prerequisites before auditioning.

I. In addition to departmental core requirements, a sequence core is required of Comms 241, 246, and 315.

II. Communication electives (14 hours), with faculty advisor approval before taking courses. *Students must be admitted to major before taking courses.*

III. Supporting courses (27 hours): See College of Fine Arts and Communications Advisement Center for requirements.

Summary of Degree Requirements for BA Broadcast Communication



1. Total hours 128.0
2. Major (communications credits only)* 38.0
3. Communications support outside department* 27.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
6. Elective hours 7.5
7. 40 hours upper-division GPA requirement of 2.0
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

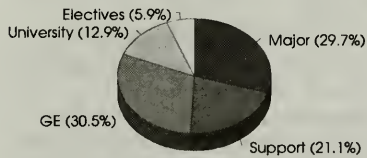
*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA Communication Studies

This program, intended for students who seek a broad, nonprofessional education in communications, provides preparation for postgraduate education.

I. In addition to departmental core requirements: 21 hours of approved work in the department, including 495R under special guidelines. See the Fine Arts and Communications Advisement Center for a statement of guidelines for communications studies.

Summary of Degree Requirements for BA Communication Studies



1. Total hours 128.0
2. Major (communications credit only) [♦] 38.0
3. Communications support outside department [♦] 27.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
6. Elective hours 7.5
7. 40 hours upper-division
GPA requirement of 2.0
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

[♦]**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BA Journalism Education

Students interested in journalism education (30 hours) should see Journalism Education (Communications) in the Secondary Education section of this catalog and plan to use their certification courses as supporting courses.

BA Journalism

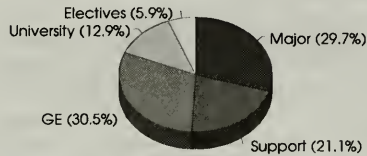
Students who major in journalism prepare for careers in news reporting, editing, and analysis in newspapers and magazines.

I. In addition to above core requirements: Comms 312, 323, 420 (10 hours). **Note:** Comms 311, 312 and 323 must be taken in sequence.

II. Communication electives (7 hours), with faculty advisor approval before taking courses.

III. Supporting courses (27 hours): See College of Fine Arts and Communications Advisement Center for requirements.

Summary of Degree Requirements for BA Journalism



1. Total hours 128.0
2. Major (communications credit only) [♦] 38.0
3. Communications support outside department [♦] 27.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
6. Elective hours 7.5
7. 40 hours upper-division
GPA requirement of 2.0
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

[♦]**Note:** Hours do not include any course that could be used to fill GE or university requirements.

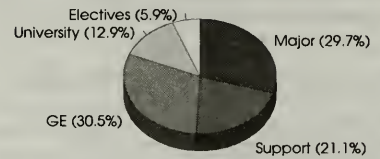
BA Public Relations

This program provides career opportunities in public relations and related fields, as well as in the creative, research and management functions of those fields. Only students officially accepted into the public relations program are allowed to register for 300- and 400-level courses in the program. Comms 307 and 461R are exceptions to this rule. Students will be admitted to the Public Relations major in July only for the academic year. Students will be reviewed after completion of Comms 336 for faculty approval to complete the major.

I. In addition to departmental core requirements: Comms 235, 312, 336, 421, 435, 458 (17 hours).

II. Supporting courses (27 hours).

Summary of Degree Requirements for BA Public Relations



1. Total hours 128.0
2. Major (communications credit only) [♦] 38.0
3. Communications support outside department [♦] 27.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
6. Elective hours 7.5
7. 40 hours upper-division
GPA requirement of 2.0
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

[♦]**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in Communications and University Honors

- Honors Program requirements:
 - The Honors General Education graduation requirements as listed in the Honors Education section of this catalog.
 - General Education: Of remaining Honors courses required, take one in each of three GE categories Arts and Letters, Natural Sciences, Social and Behavioral Sciences.
- Honors major requirements (in addition to regular department core and communications electives):
 - Honors 230R, focusing on study of mass communications and society.
 - 4 hours of Comms 397R, doing Honors work in conjunction with at least four of Comms 307, 310, 330, 350, 391, 420, 432, 447, 458, 480, 501, 521, 538, 550, 580, 581, 582, as approved by department's Honors coordinator. **Note:** The Comms 397R credit associated with a particular course must be taken concurrently with that course.
 - Honors thesis (Comms 499R, 3 hours minimum), which must be taken during senior year; oral defense of

thesis; and oral examination on insights relevant to broad societal implications of student's program. At least two semesters before graduation, students must submit proposal for thesis to department Honors coordinator for approval. Only those theses approved in advance will be acceptable.

Minor

Students minoring in communications must complete a minimum of 15 hours selected from the department core and one of the concentrations listed above. Those electing a journalism minor should also plan to take Comms 312, 323, and 480, plus one elective from the journalism offerings. Students who minor in other programs should check with the College of Fine Arts and Communications Advisement Center for recommendations. *Students seeking a teaching minor in journalism should consult Journalism Education (Communications) in the Secondary Education section of this catalog.*

Communications (Comms)

Undergraduate Courses

101. Mass Communication and Society. (3:3:0) Independent Study also.

Historical roles of mass media in society, emphasizing media effects on individuals and institutions.

150. Public Speaking. (3:3:0)

Principles and methods of public speaking; speaking experiences.

199R. Internship. (1-3:Arr.:Arr. ea.)

Prerequisite: must be admitted to a department major, take prerequisites, and have approval of faculty advisor and clearance by the Communications Department.

Professional field experience.

201. Theory of Communication and Persuasion. (2:2:0) Independent Study also.

History, development, and criticism of communication theory. Principles and ethics of persuasion.

230. Introduction to Advertising. (3:3:0) Prerequisite: Comms 101.

Principles of advertising; critical evaluation of its role and value in American society. Experience in writing and creating ads for all media.

235. Introduction to Public Relations. (2:2:1) Prerequisite: Comms 101.

Philosophy and practice of public relations in business, government, education, and other institutions. Study of publics, media, methods, press relations, and publicity. Lab required.

241. Role of Broadcast Communication Systems. (2:2:0) Prerequisite: concurrent registration in Comms 246.

Broadcast communications systems in modern society; influences, current practices, and social implications.

246. Basic Video Electronic Field Production (EFP). (3:2:Arr.) Prerequisite: concurrent registration in Comms 241.

Basic video production concepts and skills; single-camera field production theory, planning, and production skills.

251. Interpersonal Speech. (3:3:0)

Survey of interpersonal processes and language acquisition; intra- and interpersonal human communications.

307. Communications Law. (3:3:0)

First Amendment philosophy underlying regulation of the mass media; libel, privacy, media relations with courts, broadcast regulation, advertising regulation, copyright, trademark.

310. Rhetorical Methods. (3:3:0)

Speech composition and oral/audiovisual presentation for public and professional use.

311. Writing for Mass Audiences. (3:3:0)

Prerequisite: HonP 200, Phil 105, or Engl 115 with a B- minimum and admittance to department major.

Analysis of audience, purpose, and context; selection and use of appropriate voice, structure, and techniques for effective written communication.

312. Reporting. (4:3:3) Prerequisite: Comms 311.

News evaluation; interviewing; fact gathering; beat coverage of courts, government, education, labor, and business. Lab required.

315. Broadcast Writing and Performing. (2:2:Arr.) Prerequisite: Comms 261, 246, 311 and admittance to major.

Writing for radio and television; performing on radio.

323. Editing. (3:2:6) Prerequisite: Comms 307, 312.

Copy editing, headline writing, page makeup, photo editing, and handling wire copy. Lab required.

330. Advertising Copywriting. (3:3:0) Prerequisite: Comms 230; 311 or concurrent registration.

Copywriting for radio and television commercials, including in-station assignments.

332. Advertising Media Planning and Strategy. (3:3:2) Prerequisite: Comms 230, 311; Stat 105, 221, or 222.

Media planning theory and practice in context of the marketing mix. Application of computer-based models as aids to media decisions. Writing of marketing-based media plans. Case study approach to both print and broadcast media.

334. Retail Advertising Copywriting. (3:2:0) Prerequisite: Comms 230; 311 or concurrent registration.

Principles of copywriting and layout in retail advertising; writing, layout, and merchandising of retail advertising in print and broadcast media.

336. Public Relations Case Studies. (3:3:0) Prerequisite: Comms 235, 311, 312.

Cases selected from wide range of actual public relations problems confronting business, government, education, and other institutions.

344. Broadcast and Print Advertising Media Sales. (3:3:0) Prerequisite: Comms 230, 311.

Fundamentals of the media sales process. Covers both theory and application of persuasion as related to media sales.

345. Television Studio Production. (2:2:Arr.) Prerequisite: Comms 241, 246.

Studio production of video, including audio, character generator, cameras, lighting, video switching, postproduction, and station operation.

350. Rhetorical Criticism. (3:3:0)

History, development, and criticism of rhetoric; rhetorical principles in social, political, and religious movements.

353. Debate and Argumentation Strategies. (4:4:0)

Reasoning, logic, issues, strategies, and audiences in formal and informal argumentation and debate.

354. Management of and Producing News. (2:2:Arr.) Prerequisite: Comms 241, 246, 311, 315.

Writing for news on television, role of television news in society, nature of audiences, production techniques, TV news management.

355. Media Message Design. (3:3:0) Prerequisite: Comms 311, 391.

Variables influencing mediated message strategies for cognitive processing and development.

360. Intermediate Broadcast Performance. (2:2:Arr.) Prerequisite: Comms 241, 246, 311, 315.

Theory and practice presenting broadcast materials for news, documentaries, education, training, and other applications.

365R. Press Photography. (3:2:2 ea.)

Designing and producing single- and multiple-picture sequences for newspapers, magazines, and other publications.

391. Communication Research Methods. (3:3:0) Prerequisite: admittance to departmental major and completion of departmental statistics requirement.

Concepts, practices, applications; uses and abuses of research and evaluation in communications.

396R. Broadcast Practicum. (1:0:Arr. ea.)
Prerequisite: instructor's consent.

Practice and projects in broadcast communication; approval of task or projects required before registration.

397R. Honors Tutorial. (1-2:Arr.:0 ea.)
Prerequisite: instructor's consent and department.

398R. Projects in Communications.
(1-4:Arr.:0 ea.) Prerequisite: junior standing and consent of sequence coordinator. Project approval required before registration.
Projects in communication studies.

415R. Intermediate Video Production ENG/EFP. (2:2:Arr. ea.) Prerequisite: Comms 241, 246, 311, 315; 441 or concurrent registration.

Intermediate video production practice, production of news packages, production of spots, commercials, and other video products.

420. Advanced Reporting. (3:2:0)
Prerequisite: Comms 311, 312.

News coverage of government, analytic and interpretive reporting of courts, education, and other institutions. Investigative reporting, research, analysis, and writing on major public issues and trends.

421. Public Relations Writing and Production. (2:2:0) Prerequisite: Comms 235, 311, 312, 336.

Writing and editing news releases, reports, brochures, pamphlets, newsletters, speeches, and technical materials. Writing, editing, and producing for electronic media. Media spokesperson training.

422. Public Relations Writing and Production: Electronic. (2:2:2) Prerequisite: Comms 235, 311, 312, 336.

Writing, editing, and producing releases for electronic media; public service announcements, slide presentations, corporate advocacy advertising, and video news. Media spokesperson training.

427. Magazine Writing. (3:3:0) Independent Study also. Prerequisite: Comms 311 or instructor's consent.

Analysis of nonfiction magazine markets, methods of effective writing, and criticism of articles written in the course.

430. Advanced Advertising Copywriting. (3:3:0) Prerequisite: Comms 230, 311, 330, BusM 340, and instructor's consent.

Advanced copywriting with emphasis on creating campaign themes and executions.

432. Strategic Advertising Research. (2:2:0)
Prerequisite: BusM 340 and completion of departmental statistics requirement.
Department majors only.

Development and execution of a comprehensive strategic advertising research program, including data collecting, field investigating, audience analysis, and strategy development preparatory to Comms 439. Emphasis on instrument development, data gathering, and interpretation.

435. Public Relations Media and Campaigns. (3:3:0) Prerequisite: Comms 235, 311, 312, 336, 391, 421.

Applying communication principles to internal and external publics; fact finding, planning, evaluating social interrelationships; major campaigns for selected clients.

436. Media Promotion Management. (2:2:0)
Prerequisite: Comms 230.

Organization and function of media and nonmedia promotional events such as trade shows, conferences, and expositions. Creating materials in promotion of the media.

438. Public Relations and Public Affairs. (3:3:0) Prerequisite: Comms 235, 311, 312, 336.

Corporate-government relations, lobbying, and other public affairs in legislative and regulatory processes at federal, state, and local levels as arenas for public relations practice.

439. Strategic Advertising Campaigns. (3:3:0) Prerequisite: Comms 230, 311; 330 or 334; 332, 391, 432.

Researching, planning, budgeting, creating, and writing national advertising campaigns; writing and producing a complete advertising plan, accompanied by a formal client presentation.

441. Broadcast News Reporting. (2:2:Arr.)
Prerequisite: Comms 241, 246, 311, 315; 415R or concurrent registration.

Interviewing, beat coverage, fact finding, producing reports for broadcast news.

445. Media Account Development Practicum. (2:2:0) Prerequisite: Comms 344.

Professional training in media management and account development, working with assigned media in the area. Advanced management principles and techniques.

446R. Directing Studio and Location Television. (2:2:Arr. ea.) Prerequisite: Comms 241, 246, 311, 345.

Principles, theory of, and practice in directing live television and single-camera, EFP location shooting.

447. Broadcast Management Problems and Practices. (3:3:0) Prerequisite: Comms 241.

Current problems and practices found in commercial and noncommercial broadcasting.

449. Broadcast Programs and Audiences. (3:3:Arr.) Prerequisite: Comms 311, 391.

Basic program forms used in radio and television, effective program structure and appeals, audience research and measurement.

451. Nonfiction Script Writing. (3:3:0)
Prerequisite: Comms 311, 355, 391.

Tools and techniques for writing audio and video scripts for documentaries, instructional media, miniseries, and interactive media.

454. Negotiation and Conflict Resolution. (3:3:0)

Awareness, management, and resolution of conflict and stress in decision-making processes.

458. Public Relations Management. (3:3:0)
Prerequisite: Comms 235, 311, 312, 336, 421, and senior standing.

Principles of systems management in public relations; history, models of public relations.

460. Performance for Television Broadcasting. (2:2:0) Prerequisite: Comms 241, 246, 311, 315, 354, 360, 415R, 441.

Principles of vocal communication for broadcast performance; examines oral and visual aspects of broadcast communication.

461R. Symposium. (0:1:0 ea.)

Weekly guest lectures from prominent media practitioners and communication educators and researchers.

480. Ethics and Issues in Mass Communication. (3:3:0) Prerequisite: Comms 101, 201, 307, and senior standing.

Ethical issues in mass communication; integration of moral reasoning to critical mass communication issues.

495R. Research and Readings in Communication Practice. (1-4:0:0 ea.)
Prerequisite: senior standing.

Independent research projects and readings for communications majors. Projects must be approved in advance of registration.

499R. Honors Thesis. (1-3:Arr.:Arr. ea.)
Prerequisite: approval of departmental Honors coordinator.

Scholarly research paper related to student's program.

Advanced Undergraduate or Graduate Courses

501. History of Mass Communications. (3:2:0)

Print, film, and broadcast communication media from their beginnings to the present; their roles as institutions in American society.

502. Electronic Media Criticism. (2:2:0)

Criticism of electronic media systems and their products and effects; critic's role and qualifications.

510. Mass Media Administration. (2:2:0)

Basic principles of management as they relate to organizing and administering newspapers, magazines, radio stations, and television stations.

515. Broadcast Documentary Production. (3:2:3) Prerequisite: Comms 314, 316, 360.

In-depth reporting and presentation of news and public affairs information for miniseries, magazine formats, and documentary specials for radio and television.

521. Opinion Writing. (3:2:0) Prerequisite: Comms 312 or 316.

Function of editorials, columns, commentaries, and reviews in the mass media.

528. Magazine Editing and Publishing. (2:2:0) Prerequisite: Comms 312.

Layout and design for magazines and business publications. Contemporary practices in content and production.

538. Impact of New Media Technologies. (3:3:0)

Impact of computerized information delivery on traditional mass media and on society. Existing electronic systems.

550. Communicating Values Through Media. (2:2:0)

Variables influencing development of values through mediated messages.

555. Media Evaluation. (2:2:0) Prerequisite: Comms 391 or instructor's consent.

Techniques used to evaluate films, TV, or audio programs before and after production.

556. Advanced Program Development and Production. (2:2:Arr.) Prerequisite: Comms 346, 355; or instructor's consent.

Broadcast producing; observing professional standards.

580. Comparative Mass Media Systems. (3:3:0)

Comparison of national media systems; normative theories of media organization and control.

581. International Communication. (3:3:0)

International information flow; information flow and foreign policy; international regulation; cultural imperialism; intercultural interaction.

582. Communication and National Development. (3:3:0)

Role of telecommunication and mass and interpersonal communication in national development, focusing on Third World; technology, policy and methods, problems, issues.

590R. Selected Readings and Projects. (1-2:0:0 ea.)

Independent research and study outside usual thesis work.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

609. Proseminar. (1:1:0)**610. Studies in Communication Theory. (3:3:0)****611. Research Methods in Communication. (3:3:0)****612R. Research Practicum. (1:0:0 ea.)****613. Literature of Communications. (2:2:0)****615. Public Opinion and Propaganda. (3:3:0)****616. Seminar in Mass Media and Society. (3:3:0)****617. Mass Communications and Government. (3:3:0)****690. Seminar in Communications. (1:1:0)****691R. Special Studies in Communications. (1-3:Arr.:0 ea.)****695R. Topical Seminar. (1-3:0:0 ea.)****699R. Master's Thesis. (1-6:Arr.:0 ea.)**

Comparative Literature

See Humanities, Classics, and Comparative Literature.

Computer Science

Dan R. Olsen, Chair (3360 TMCB)

Professors

Burton, Robert Preece (1974) PhD, U. of Utah, 1973.

Campbell, Douglas M. (1971) BA, Harvard U., 1967; PhD, U. of North Carolina, 1971.

Cornell, Aurel (1980) MS, PhD, Polytechnic Inst. of Timisoara, Rumania, 1960, 1971.

Embley, David W. (1982) BA, MS, U. of Utah, 1970, 1972; PhD, U. of Illinois, 1976.

Hays, Bill (1970) BS, East Texas State U., 1963; MS, U. of Iowa, 1967; PhD, Northwestern U., 1970.

Higgins, John C. (1961) BA, MA, Brigham Young U., 1958, 1960; PhD, U. of California, Berkeley, 1966.

Ivie, Evan Leon (1979) BS, BES, Brigham Young U., 1956, 1956; MS, Stanford U., 1957; PhD, Massachusetts Inst. of Technology, 1966.

Norman, Theodore A. (1970) BS, U. of Utah, 1962; MS, PhD, Washington State U., 1968, 1970.

Olsen, Dan R. (1985) BS, MS, Brigham Young U., 1976, 1978; PhD, U. of Pennsylvania, 1981.

Stokes, Gordon E. (1969) BS, Brigham Young U., 1961; MS, U. of Idaho, 1969; EdD, Brigham Young U., 1981.

Woodfield, Scott N. (1985) BA, MA, Brigham Young U., 1975, 1978; PhD, Purdue U., 1980.

Associate Professors

Barrett, William A. (1987) BA, PhD, U. of Utah, 1974, 1978.

Beus, H. Lynn (1971) BA, Brigham Young U., 1961; MS, Case Inst. of Technology, 1964; PhD, Case Western Reserve U., 1967.

Christensen, Larry C. (1983) BA, Brigham Young U., 1963; MA, Central Michigan U., 1968; EdD, Brigham Young U., 1981.

McClurg, Lynn E. (1972) BGE, U. of Nebraska, 1966; MS, U. of Southern California, 1972; EdD, Brigham Young U., 1978.

Wright, Norman Edward (1963) BS, Brigham Young U., 1951.

Assistant Professors

Egbert, Parris (1992) BS, Utah State U., 1986; MS, PhD, U. of Illinois, 1990, 1992.

Martinez, Tony R. (1987) BA, Brigham Young U., 1982, MA, PhD, U. of California, Los Angeles, 1983, 1986.

Ng, Yiu Kai (Dennis) (1991) BS, Brigham Young U., 1982; MS, Brigham Young U., 1984; PhD, Kansas State U., 1991.

Lecturers

Ivie, William E. (1964) BS, Brigham Young U., 1974.

Robison, Parley P. (1967) BS, U. of Utah, 1958.

Emeriti

Burton, Robert C. (1964) BS, Brigham Young U., 1956; PhD, U. of North Carolina, 1963.

Dean, C. Edwin (1949) BS, MS, Brigham Young U., 1948, 1952; MS, U. of Michigan, 1955.

Todd, Henry S. (1982) BES, MS, Brigham Young U., 1960, 1965; MS, U. of Rochester, 1968; PhD, U. of Arizona, 1973.

Adjunct Professors

Ashton, Alan C. (1972) BA, PhD, U. of Utah, 1966, 1970.

Tate, Karen E. (1989) BA, PhD, U. of Utah, 1977, 1988.

Urie, Paul McKay (1989) BS, Brigham Young U., 1971; PhD, MD, U. of Utah, 1975, 1979.

James K. Archibald and Brent E. Nelson of the Electrical and Computer Engineering Department are assisting with computer science courses and graduate programs by approval of the Computer Science Department.

Programs and Degrees

BS	Computer Science
BA	Computer Science Teaching
MS	Computer Science
PhD	Computer Science

The BS curriculum is accredited by the Computer Science Accreditation Commission of the Computing Sciences Accreditation Board (CSAB).

The degree programs in computer science concentrate on the fundamental techniques and knowledge used in designing and implementing information processing systems, with emphasis on systems software design and computer organization.

Graduates in any of these areas find ready employment in almost any area of computer use.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

Note: All hours of credit applied toward a major in computer science must be of C– or better and must be taken within eight years of declaring the computer science fundamentals major. Any exceptions must be approved by the department. Students may choose to graduate under later requirements by updating their date of entry into the major at the college advisement center.

Requirements for All Degree Programs in Computer Science

Fundamental courses: Math 119; Phscs 121, 122; CS 142, 143, 152, 153.

BS Computer Science

Majors are selected on the basis of overall GPA, performance in the preceding fundamental courses, and the availability of openings in the program.

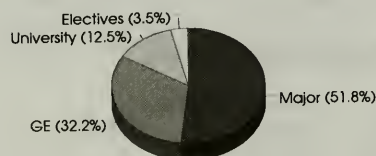
I. Completion of fundamental courses.

II. Courses required after acceptance into the major: ECEn 220; Engl 316; Stat 321; Math 343; CS 232, 252, 290, 312, 327, 330, 353, 380, 404, 444.

III. Electives: Four classes, three of which must come from CS 428, 431, 453, 455, 460, and the fourth from CS 370, 428, 429, 431, 453, 455, 460, 470, Math 311, or any of the 500-level computer science courses.

IV. Science electives: Two additional science courses selected from Chem 105, 106, 107; Phscs 221, 222; Biol 130, 276; Zool 204, 205; Geol 111.

Summary of Degree Requirements for BS Computer Science



1. Total hours	128.0
2. Major hours*	66.0
3. General Education requirements	41.0
Core	16.0

First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	4.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

***Note:** Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
Math 119, 343	4	3
CS 142, 152	5	
CS 143		2
Physical Science	3	
AHtg 100		3
Religion	2	2
Phscs 121		3
Engl 115		3
Physical education and health	1.5	
Second Year		
CS 153, 232	6	
ECEn 220		4
CS 252		3
Phscs 122	3	
Biol 130	4	
Stat 321		3
Religion	2	2
Physical education	0.5	0.5
University elective		3
CS 290		1
Third Year		
CS 327, 330	6	
CS 312, 353, 380		9
Engl 316	3	
University elective	3	
Religion		2
History of Civilization		3
Arts and Letters electives	3	3
Fourth Year		
CS 404, 444	6	
Computer science electives	3	9
Religion	2	2
History of Civilization	3	
Social and Behavioral Science elective		3
University elective		3
Science elective	3	

BA Computer Science Teaching

See Computer Science in the Secondary Education section of this catalog for information about the teaching major.

Teaching Minor

See Computer Science in the Secondary Education section of this catalog. The computer science teaching minor serves as a highly useful minor with a mathematics or business teaching major or a number of other areas. Students should contact the College of Physical and Mathematical Sciences Advisement Center and the computer science teaching advisor.

Advisement

Computer science majors, especially those planning graduate work, are advised to acquire a strong background in mathematics, possibly a minor.

Personnel in the College of Physical and Mathematical Sciences Advisement Center will advise regarding the fundamental and core courses, major admittance, and suggested General Education. Questions regarding curriculum and career decisions should be directed to the undergraduate advisor in the Computer Science Department.

Computer Science (CS)

Undergraduate Courses

103. Elementary Computer Applications. (2:2:0) F, W, Sp, Su

Computer organization, problem solving, and information systems, emphasizing use of the computer for problem solving and developing programming skills.

130. Scientific Computing—C. (2:2:2) F, Su
Computer programming for engineering and science students using C.

131. Scientific Computing—Fortran. (2:2:2) W
Computer programming for engineering and science students using Fortran.

142. Introduction to Computer Programming. (2:2:0) F, W, Sp, Su
Prerequisite: knowledge of algebra.

Principles of algorithm formulation and high-level language programming using PASCAL.

143. Introduction to Computer Organization. (2:2:0) F, W, Sp, Su
Prerequisite: knowledge of algebra.
Fundamentals of computer organization and operation. Memory structure, registers, arithmetic and logical functions, instruction formats, addressing modes, machine and assembly languages, and internal-external data representation.

152. Discrete Structures 1. (3:3:0) F, W, Sp
Prerequisite: CS 142 or 143 or concurrent registration.

Algebraic structures applied to computers, including sets, relations, propositional logic, predicate logic and functions.

153. Discrete Structures 2. (3:3:0) F, W, Su
Prerequisite: CS 152.

Algebraic structures applied to computers, including lattices, boolean algebra, undirected graphs, and directed graphs.

199R. Computer Science Cooperative Education. (1-3:0:0 ea.) F, W, Sp, Su
Prerequisite: department's consent.

Internship or cooperative education experience with an organization outside BYU.

220. Digital Logic Design. (3:2:3) F, W, Su
Prerequisite: Phscs 122, CS 143, 153.

Technologies, methods, and concepts of computer design. Laboratory experience in subsystem construction. Fee.

232. Computer Programming. (3:3:0) F, W, Sp, Su
Prerequisite: Math 119; CS 142, 143, 152, or equivalent.

Object-oriented programming, abstract data types, algorithms and data structures including recursion, lists, stacks and queues, trees, graphs, sorting, and searching. Introduction to algorithm analysis.

252. Introduction to Computational Theory. (3:3:0) F, W, Alt. term
Prerequisite: CS 153.

Finite automata, regular expressions, grammars, language, turing machines, computability.

290. Computer Language Transition. (1:1:0) F, W, Sp

Object-oriented programming in C++.

302. Computer Science Education. (3:3:0) F, W
Prerequisite: Math 112 or 119; CS 103 or 142.

Curriculum development and course design for the computer science teacher in secondary schools.

312. Algorithm Analysis. (3:3:0) F, W, Alt. term
Prerequisite: CS 232, 252, 290.

Analysis of algorithms including searching, sorting, graphs, and trees.

327. Concepts of Software Development. (3:3:0) F, W, Sp
Prerequisite: CS 252, 290.

Principles, concepts, methods, and tools of software engineering. Covers requirements specification, program design, quality assurance, project management, configuration management.

330. Concepts of Programming Languages. (3:3:0) F, W, Sp
Prerequisite: CS 232, 252.

Principles and concepts characterizing high-level computer programming languages, process and data abstraction, encapsulation, inheritance, functional programming, logic programming, scanners, and parsers.

353. Database Modeling Concepts. (3:3:0) F, W, Alt. term
Prerequisite: CS 232, 252, 290.

Database models: entity-relationship, relational, network, hierarchical, deductive, object-oriented. Integrity constraints, query languages, database design.

370. AI Languages and Applications. (3:3:0) W, Sp
Prerequisite: CS 330.

Programming in LISP, PROLOG, or other artificial intelligence languages, with applications to basic AI tasks.

380. Computer Architecture. (3:3:0) F, W, Alt. term
Prerequisite: CS 220, 232, 290.

Memory and addressing, arithmetic schemes, data channels, order codes, microprogramming, and multiprocessors.

404. Computers in Society. (3:3:0) F, W, Alt. term
Prerequisite: junior standing.

Societal impact of computer technology, the computer scientist's place in society, ethical issues. Reading, discussion, and writing seminar.

428. Software System Design and Implementation. (3:3:0) Alt. sem., Alt. term
Prerequisite: CS 312, 327, 330, 353.

Analysis, design, implementation, and testing of significant software systems.

429. Software Testing. (3:3:0) F
Prerequisite: CS 312, 327, 353.

Strategies for testing large systems compared and critiqued, with opportunities to test actual systems.

431. Algorithmic Languages and Compilers. (3:3:0) Alt. sem., Alt. term
Prerequisite: CS 312, 327, 330.

Formal description of algorithmic languages and techniques used in their compilation: semantics, ambiguities, procedures, replication, iteration, recursion.

444. Operating Systems Design. (3:3:0) Alt. sem., Sp
Prerequisite: CS 312, 327.

Principles and concepts of operating systems design and the implementation of an operating system.

453. Database Implementation. (3:3:0) F, W, Sp, Su
Prerequisite: CS 312, 327, 353.

File organization and management, external data structures, database implementation including query processing, crash recovery, concurring control, transaction processing, and distributed database management.

455. Computer Graphics. (3:3:0) Alt. sem., Alt. term
Prerequisite: CS 312, 327, and instructor's consent.

Interactive computer graphics systems programming and architecture.

460. Computer Communications. (3:3:0) Alt. sem., Alt. term
Prerequisite: CS 312, 327, 380.

Introduction to data communications and computer networking. Communications fundamentals, computer networks, software, architecture, telecommunications, regulation, standards.

470. Introduction to Artificial Intelligence. (3:3:0) F
Prerequisite: CS 312, 327.

Recommended: CS 370.

Computers in problem solving, natural language understanding, theorem proving, game playing, robot development, and related areas.

Advanced Undergraduate or Graduate Courses

501R. Special Topics in Computer Science. (1-3:Arr:0 ea.) F, W, Sp, Su
Prerequisite: instructor's consent.

Special subjects as announced before each semester.

510. Formal Languages and Syntactic Analysis. (3:3:0) F, Alt. term
Prerequisite: CS 431 or instructor's consent.

Definition of formal grammars and algorithms for syntactic analysis.

512. Analysis of Algorithms. (3:3:0) W
Prerequisite: CS 252 or instructor's consent.

Survey of important algorithms. Connections to theoretical computer science and the analysis of algorithms.

521. Pattern Recognition. (3:3:0) W
Prerequisite: CS 330, 453, or instructor's consent.

Design and use of pattern classifiers for recognition and classification of one- and two-dimensional signals such as voice, images, and handwriting. Emphasis on images.

525. Software Creation. (3:3:0) F
Prerequisite: CS 327, 428.

Principles associated with management of large software systems. Controlling development, cost and time estimations, metrics, team structures, configuration management, and quality assurance.

531. Compiler Theory and Design. (3:3:0) Alt. yr.
Prerequisite: CS 431.

Theory and design of compilers and interpreters, including syntax-directed compilers and metacompilers.

532. Advanced Programming Languages and Models. (3:3:0) Alt. yr.
Prerequisite: CS 431.

Definitions and implementation techniques for functional languages, logic languages, and object-oriented languages. Interactive languages and interactive programming environments.

535. (CS-Psych 577) Human-Computer Interaction. (3:3:0) F
Prerequisite: Graduate or senior standing.

Human/machine interfaces for hardware/software integration. Psychological principles of computer interfacing. Human engineering, ergonomics, software design principles for user-friendly applications.

544. Advanced Operating Systems. (3:3:0) F, Alt. term
Prerequisite: CS 444.

Advanced operating system concepts and design techniques, including concurrency, distributed systems, networking, synchronization, multitasking, etc.

545. Process Control Systems. (3:3:0) W
Prerequisite: CS 444.

Concurrent and distributed real-time operating systems and programming environments for industrial automation.

550. Computer Vision 1. (3:3:0) F
Prerequisite: CS 330, 453, or instructor's consent.

Image formation, reconstruction, compression, enhancement, edge detection, feature extraction, region growing, scene segmentation, boundary detection, morphological transforms, texture, and recovery of 3-D shape.

551. Relational Database Theory 1. (3:3:0) F, Alt. term
Prerequisite: CS 453.

Relational algebra, data dependencies, normalization, and design theory.

555. Advanced Computer Graphics 1. (3:3:0) W
Prerequisite: CS 455 or instructor's consent.

Advanced interactive computer graphics systems programming and architecture.

556. Interactive Software Systems. (3:3:0) W
Prerequisite: CS 330, 455.

Techniques to implement human/computer interfaces. Primitive interactive techniques. Grammar, automata, procedure, object-based dialogue descriptions. Tools for automatically generating and evaluating user interfaces. Screen layout; data presentation tools.

560. Computer Networks. (3:3:0) W
Prerequisite: CS 460, Stat 321.

Computer networking, software architecture, organization, protocols, routing, global networks, local networks, internetworking, standards, and applications.

561. Theoretical Foundations of Computer Science. (3:3:0) W, Su
Prerequisite: CS 312 or instructor's consent.

Formal languages, automata theory, sequential machines, enumerability, computability, and undecidability.

565. Data Security. (3:3:0) W
Prerequisite: CS 404. Recommended: CS 453, 560.

Data security problems and solutions. Protection of stored or transported data. Data security principles. Hardware and software systems; mathematical, technical, and legal considerations.

575. Expert Systems Design. (3:3:0) W
Prerequisite: CS 370 or instructor's consent.

Knowledge-based systems, fundamentals of knowledge engineering, rule-based systems, tools for expert system development.

576. Intelligent Tutoring. (3:3:0) Alt. term
Prerequisite: CS 575 or instructor's consent.

Taxonomy of knowledge-based computer-assisted instruction; design and evaluation of intelligent tutoring models.

578. Neural Networks and Connectionist Computing. (3:3:0) F
Prerequisite: CS 380, Math 113.

Neurally inspired computer architectures and methods of computation using massively parallel networks.

588. Non-von Neumann Computing and Massively Parallel Architecture. (3:3:0) W
Prerequisite: CS 380.

Novel and promising computing mechanisms and architectures that depart from traditional von Neumann methods.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

627. Theoretical Foundations of Software Engineering. (3:3:0)

650. Computer Vision 2. (3:3:0)

651. Relational Database Theory 2. (3:3:0)

678R. Topics in Neural Networks. (3:3:0 ea.)

690R. Independent Research. (1-3:0:0 ea.)

691. Graduate Seminar. (0:0:0)

699R. Master's Thesis. (1-18:0:0 ea.)

751R. Advanced Topics in Database Systems. (3:3:0 ea.)

799R. Doctoral Dissertation. (1-9:0:0 ea.)

Czechoslovakian

See Germanic and Slavic Languages.

Dance

Phyllis C. Jacobson, Chair (296 RB)

Professor

Jacobson, Phyllis C. (1957) BS, MS, Utah State U., 1953, 1954; PhD, U. of Utah, 1971.

Associate Professors

Austin, Edwin G. (1984) BS, MA, Brigham Young U., 1978, 1980.

Black, Catherine H. (1972) BPE, U. of Alberta, Canada, 1968; MFA, U. of Utah, 1972.

Davis, Susanne Johnson (1974) BS, MS, Brigham Young U., 1967, 1971.

Debenham, Hadd Patrick (1976) BS, Brigham Young U., 1973; MA, U. of California, Los Angeles, 1976.

Ditson, Leslie Allen (1982) BA, MA, U. of California, Los Angeles, 1969, 1970.

Gibb, Sara Lee (1965) BA, MS, Brigham Young U., 1959, 1970.

Assistant Professors

Allen, Sandra Birch (1969) BFA, MFA, U. of Utah, 1964, 1967.

Berrett, Marilyn (1985) BA, U. of Utah, 1979; MA, Brigham Young U., 1984.

Lyman, Emerson S. (1973) BS, MA, Brigham Young U., 1957, 1968; EdS, U. of Utah, 1972.

Prohosky, Caroline (1986) BS, Brigham Young U., 1972; MA, U. of California, Los Angeles, 1980.

Wakefield, Bernard Lee (1980) BA, MA, Brigham Young U., 1977, 1982.

Adjunct Assistant Professor

Sowell, Debra Hickenlooper (1990) BA, Brigham Young U., 1975; MA, Tufts U., 1980; PhD, New York U., 1990.

Instructor

Lanham, Mark (1989).

Emeritus

Jensen, Mary Bee (1952) BA, Park Coll., 1939; MA, Brigham Young U., 1963.

Programs and Degrees

BA Dance Education:
Secondary Teacher Certification

BA Dance

Emphases:

Ballet
Ballroom Dance
Composite Dance
Modern Dance

BFA Music Dance Theatre

MA Dance

The Department of Dance is made up of four divisions: Ballet, Ballroom, Folk, and Modern. These divisions work cooperatively to provide opportunities for all students at the university to develop their potential in dance.

Besides the wide variety of courses (numbered 100-199) that apply toward the university requirement for physical education, there are professional courses that develop leadership, performance, and choreographic ability in all phases of dance. Performance opportunities are provided in on-campus concerts and off-campus performances with groups that travel throughout the world.

The dance education major is designed to qualify students for teacher certification for secondary schools. The dance and the music dance theatre majors prepare students for careers in the professional and commercial sectors as teachers and/or performers.

Program requirement sheets including recommended General Education courses are available at the college advisement center (205 RB).

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Dance

I. Dance ability will be evaluated during first week of first semester for advisement and placement in program. Contact Dance Department for specific details.

II. Official acceptance into major program is based on proficiency and must be concurrent with enrollment in Dance 242, ideally during sophomore year.

III. To qualify for graduation 50 percent of the major/minor program must be completed at BYU.

IV. Majors are counseled to maintain the following body composition guideline for a healthy and aesthetic body image, as measured by skin-fold caliper or hydrostatic assessment:

Women: 22–14 percent body fat.
Men: 15–8 percent body fat.

V. Any grade below C– in major courses is not acceptable for graduation. Dance technique courses require a grade of B– for advancement to next level.

Note: Qualified students may substitute higher-level technique courses for required lower-level technique courses with permission from the Department of Dance.

BA Dance Education

Secondary Teacher Certification: This major offers a background in many forms of dance, with an emphasis in modern dance, and prepares students for certification to teach in the public schools. See Dance in the Secondary Education section of this catalog for specific course requirements.

BA Dance

I. Core (29.5 hours): Dance 135, 231, 240R, 242, 261, 270, 280, 290, 291R, 355, 362, 364, 369, 460, 461, 469; one of 171, 172; one of 184, 185; PE 363.

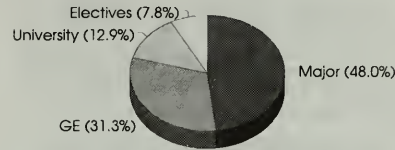
II. One of the following four areas of emphasis:

A. Ballet Emphasis

1. Technique support: 16.5 hours of daily technique from (as placed by Ballet Division): Dance 293R, 390R, 391R, 393R, 490R, 493R.
2. Performance support: 4 hours of Dance 498R.
3. Methodology support: Dance 367, 396.
4. Miscellaneous support: Dance 192, 494R, 495R.
5. Electives (repeats not permissible without approval): 3 hours from Dance 130, 133, 134R, 171, 172, 184, 185, and 200 or higher (excluding 260); PE 136, 137, 138, 243R, 343, 460, 462; Art 111; Hum 101; Music

101, 203; Phil 214; ThF 115, 123, 127R, 141, 327R, 341, 362.

Summary of Degree Requirements for Ballet Emphasis



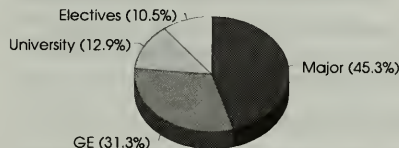
1. Total hours 128.0
2. Major hours ♦ 61.5
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 10.0
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

B. Ballroom Dance Emphasis

1. Technique support: 7 hours from Dance 284, 285, 380R, 384R, 385R.
2. Performance support: 4 hours from Dance 388R, 488R, 500R (competition class).
3. Methodology support: Dance 386.
4. Miscellaneous support: Acc 200, BusM 340, Dance 184 or 185 (whichever not taken in core), 399R (2 hours), 484R (2 hours).

Summary of Degree Requirements for Ballroom Dance Emphasis



1. Total hours 128.0
2. Major hours ♦ 58.0
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0

- Advanced Math/Foreign Language 7.0
- Advanced Writing 3.0
- 4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- 5. Elective hours 13.5

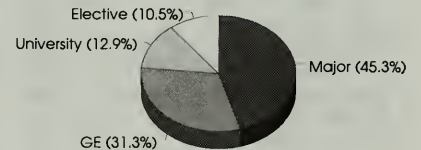
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

C. Composite Dance Emphasis

1. Technique support: 10 hours from Dance 241R, 271, 284, 285, 293R, 340R, 371, 380R, 384R, 385R, 390R, 391R, 393R, 440R, 490R, 494R, 495R, 540R.
2. Performance support: 4 hours from Dance 232R, 278R, 358R, 368R, 378R, 388R, 468R, 478R, 488R, 498R.
3. Methodology support: 3 hours from Dance 332, 336, 365, 366, 367, 376, 386, 396.
4. Electives (repeats not permissible without approval): 8 hours from Dance 130, 133, 134R, 171, 172, 184, 185, 192, and all dance courses numbered 200 or higher (excluding 260); PE 460, 462.

Summary of Degree Requirements for Composite Dance Emphasis



1. Total hours 128.0
2. Major hours ♦ 58.0
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 13.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0

8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

D. Modern Dance Emphasis

1. Technique support: 10 hours from Dance 241R, 340R, 440R, 540R.
2. Performance support: 4 hours from Dance 358R, 368R, 468R.
3. Methodology support: 3 hours from Dance 365, 366, 367.
4. Miscellaneous support: Dance 363, 390R, 464, 562R.
5. Electives (repeats not permissible without approval): 4 hours from Dance 130, 133, 134R, 171, 172, 184, 185, 192, and all dance courses numbered 200 or higher (excluding 260); PE 460, 462.

- I. Application and audition for acceptance into the program during first semester of registration.

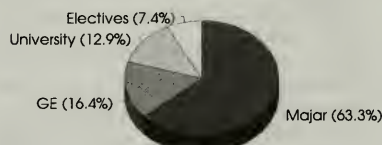
- II. Music 113, 161, 186, 260R (6 hours), 261, 290, 360R (6 hours), 361.

- III. Dance 131, 134R, 135, 231, 235, 240R, 242, 290, 291R, 340R, 361, 362, 363, 390R.

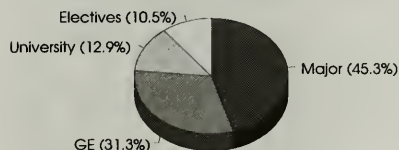
- IV. ThF 121, 122, 123, 124R, 127R, 323R, 361, 522R; one course from ThF 324R, 423R, 424R, 523R, or 524R.

- V. MDT Seminar (Music 228, Dance 228, ThF 228), History of Music Dance Theatre (Music 300, Dance 300, ThF 300), MDT Senior Performance Project (Music 426R, Dance 426R, ThF 426R); required involvement in Music 319R, Dance 229R/429R, ThF 240R/540R (3 hours), and Music 399R, Dance 399R, or ThF 399R (1 hour).

Summary of Degree Requirements for BFA Music Dance Theatre



Summary of Degree Requirements for Modern Dance Emphasis



1. Total hours	128.0
2. Major hours ♦	58.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	13.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BFA Music Dance Theatre

The BFA in music dance theatre is an interdisciplinary degree offered by the College of Fine Arts and Communications through the cooperative involvement of its Department of Music and Department of Theatre and Film and the College of Physical Education's Department of Dance.

1. Total hours	128.0
2. Major hours ♦	81.0
3. General Education requirements	21.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	0.0
Advanced Math/Foreign Language	0.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	9.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Dance Education Minor

For information regarding secondary teacher certification, see Dance in the Secondary Education section of this catalog.

Dance Minor

- I. Core (12.5 hours): Dance 240R, 260, 261, 270, 280, 290, 355, 364.

- II. 7.5 hours from one of the following five areas of emphasis:

- A. *Ballet Emphasis:* Dance 192; 291R; 390R, 391R, or equivalent; 396; 2 hours from Dance 231, 242, 293R, 393R, 490R, 493R, 494R, 495R, 498R.
- B. *Ballroom Dance Emphasis:* Dance 386; 4.5 hours from 184, 185, 284, 285, 380R, 384R, 385R; 2 hours from 388R, 488R.
- C. *Composite Dance Emphasis:* 1 or 2 hours from Dance 332, 336, 365, 366, 367, 376, 386, or 396; plus electives (repeats not permissible) from all dance courses numbered 200 or higher (excluding 260). A maximum of 1.0 credits may be selected from Dance 130, 133, 134R, 135, 171, 172, 184, 185, 192.
- D. *Folk Dance Emphasis:* Dance 172, 173, 192, 271, 371, 376, 641; 2 hours from 278R, 378R, 478R.
- E. *Modern Dance Emphasis:* Dance 242, 362, 363, 366.

Minor hours req.: 20

Dance (Dance)

Undergraduate Courses

130. **Aerobic Dance.** (0.5:0:2) Independent Study also.

Dance and other rigorous activities performed to music to attain cardiovascular fitness.

131. **Jazz Dance, Beginning.** (0.5:0:2)

- 132R. **Precision Dance, Beginning.** (0.5:0:2 ea.) Various styles including marching, jazz, military, novelty.

133. **Movement for Theatre.** (0.5:0:2) Developing the body in terms of strength, flexibility, responsiveness, and freedom of movement.

- 134R. **Specialty Dance.** (0.5:0:2 ea.)

135. **Tap Dance, Beginning.** (0.5:0:2)

136. **Dance Movement Education for Elementary School Teachers, Beginning.** (0.5:0:2)

140. **Modern Dance, Beginning.** (0.5:0:2)

141. **Modern Dance, Intermediate.** (0.5:0:2) Prerequisite: Dance 140 or equivalent.

164. **Movement for Musicians.** (0.5:0:2)

Developing strength, flexibility, responsiveness, centering, breath, and freedom of movement through both fine and gross motor activities.

170. **Folk Dance, Beginning.** (0.5:0:2)

171. **Clog Dance, Beginning.** (0.5:0:2)

172. **Country Western and Square Dance.** (0.5:0:2)

Fundamental dance skills in western styles of country, round, and square dance.

173R. Ethnic Dance. (0.5:0:2 ea.)

Ethnic dances of various cultures including American Indian, Mexican, Polynesian, and others.

180. Social Dance, Beginning. (0.5:0:2)

Independent Study also.

Traditional and popular ballroom dance; also social skills.

184. Ballroom Dance, International Modern, Beginning. (0.5:0:2)

Bronze level. Waltz, foxtrot, tango, quickstep.

185. Ballroom Dance, International Latin, Beginning. (0.5:0:2)

Bronze level. Cha-cha, rumba, samba, jive, paso doble.

190. Ballet, Beginning. (0.5:0:2)

Fundamentals of ballet technique for those with little or no previous training.

192. Character Dance. (0.5:0:2)

Male and female techniques of traditional national folk forms stylized with classical ballet discipline.

228. Music Dance Theatre Seminar.

(1:Arr.:Arr.) Prerequisite: concurrent registration in Music 228 and ThF 228.

Intensive integration of music, dance, and theatre for the performer. For music dance theatre BFA majors only.

229R. Dance Performance 1. (1-3:Arr.:Arr. ea.) Prerequisite: consent of production director.

Participation as dancers in concert dance production.

231. Jazz Dance, Intermediate. (1:0:3)

Prerequisite: Dance 131 or equivalent; 240R or 290.

232R. Precision Dance, Performance. (1:0:3 ea.) Prerequisite: Dance 132R or equivalent and audition.

Cougarettes performing company.

235. Tap Dance, Intermediate. (1:0:3)

Prerequisite: Dance 135 or equivalent.

240R. Modern Dance Technique and Theory 1. (1:0:4 ea.)

Fundamental dance skills and basic theories.

241R. Modern Dance Technique and Theory 2. (2.5:0:7.5 ea.) Prerequisite: Dance 240R or equivalent experience in modern dance.**242. Studio Workshop in Modern Dance.**

(3.5:0:9) Prerequisite: Dance 240R, 261, or equivalent.

Technique, improvisation, and composition in a workshop structure.

260. Introduction to Dance. (3:3:0) Honors also.

Critical analysis of dance as a cultural and expressive art, including relationship of dance to other art forms. No previous experience in dance required.

261. Orientation to Dance Forms. (1:2:0)

Philosophical approach to understanding current dance forms. Contemporary trends and professional opportunities within broad spectrum of dance.

270. Folk Dance, Intermediate. (1:0:3)

Prerequisite: Dance 170 or equivalent.

271. Clog Dance, Intermediate. (1:0:3)

Prerequisite: Dance 171 or equivalent.

275. Rhythm and Dance. (1:1:2)

For elementary school teachers.

278R. Folk Dance Performance Techniques. (1:0:3 ea.) Prerequisite: audition.**280. Social Dance, Intermediate.** (1:0:3)

Prerequisite: Dance 180 or equivalent.

284. Ballroom Dance, International Modern, Intermediate. (1:0:3) Prerequisite: Dance 184 or equivalent.

Silver level. Waltz, foxtrot, tango, quickstep.

285. Ballroom Dance, International Latin, Intermediate. (1:0:3) Prerequisite: Dance 185 or equivalent.

Silver level. Cha-cha, rumba, samba, jive, paso doble.

290. Ballet Accelerated Technique 1.

(2.5:0:7.5) Prerequisite: dance major standing or instructor's consent.

291R. Ballet Technique 2. (1:0:3 ea.)

Prerequisite: Dance 290 or equivalent.

293R. Ballet Pointe, Beginning. (0.5:0:1 ea.)

Prerequisite: Dance 291R or equivalent.

300. History of Music Dance Theatre. (1:1:0) Prerequisite: concurrent registration in Music 300 and ThF 300.

Dance in Western tradition from classical antiquity to present, emphasizing union of music, dance, theatre.

331. Jazz Dance, Advanced. (1.5:0:4.5)

Prerequisite: Dance 231 or equivalent; 241R, 242, or 291R.

332. Precision Dance Skills and Teaching Techniques. (1:1:1) Prerequisite: Dance 132 or equivalent.**335. Tap Dance, Advanced.** (1:0:3)

Prerequisite: Dance 235 or equivalent.

336. Aerobic Dance Teaching Techniques.

(1:2:2) Prerequisite: Dance 130, FSN 100, Dance 369 or PE 362, PE 363 or verified equivalencies.

340R. Modern Dance Technique and Theory 3. (2.5:0:7.5 ea.)

Prerequisite: Dance 241R or equivalent experience in modern dance.

355. Dance Production, Introduction. (2:2:2)

Principles and practices of technical aspects of dance production.

358R. Dance Improvisation Performance. (2:0:6 ea.) Prerequisite: audition.

Impulse dance company experiences in improvisation as a performing art.

361. Music Dance Theatre Choreographic Styles. (2:0:3)

Physical and conceptual aspects of dance styles as they relate to music dance theatre.

362. Dance Composition, Intermediate.

(1:1:3) Prerequisite: Dance 242.

Fundamental compositional structure emphasizing visual, kinesthetic, and musical aspects.

363. Dance Improvisation, Intermediate.

(1:0:4) Prerequisite: Dance 242.

364. Rhythm Analysis for Dance. (1:1:1)

Relationship of rhythm to movement, sound, and musical accompaniment.

365. Dance Movement Education for Elementary School Teachers. (1:1:2)

Theory and teaching experience in creative movement for preschool and elementary school children.

366. Modern Dance Teaching Methods.

(2:2:2) Prerequisite: Dance 242 or equivalent, 261.

Planning, teaching, and evaluating lessons.

367. Children's Dance Methods. (1:2:1)

Prerequisite: Dance 242.

368R. Modern Dance Choreography and Performance. (1:1:2 ea.) Prerequisite: audition.

Dancensemble dance company experiences in modern dance choreography and performance for concert settings.

369. Kinesiology for Dancers. (3:3:0)

Prerequisite: Zool 260, Math 99, PhyS 100 or equivalent.

371. Clog Dance, Advanced. (1:0:3)

Prerequisite: Dance 271 or equivalent.

376. Folk Dance Teaching Techniques.

(1:1:2) Recommended: Dance 170 or equivalent.

378R. Folk Dance, Advanced Performance.

(1:0:3 ea.) Prerequisite: audition.

380R. Social Dance, Advanced. (1:0:3 ea.)

Prerequisite: Dance 280 or equivalent.

384R. Ballroom Dance, International Modern, Advanced. (1:0:3 ea.)

Prerequisite: Dance 284 or equivalent.

Gold level. Waltz, foxtrot, tango, quickstep.

385R. Ballroom Dance, International Latin, Advanced. (1:0:3 ea.) Prerequisite: Dance 285 or equivalent.

Gold level. Cha-cha, rumba, samba, jive, paso doble.

386. Social Dance Teaching Techniques.

(1:1:2) Prerequisite: Dance 180 or equivalent.

388R. Ballroom Dance Performance, Intermediate. (1:0:3 ea.)

Prerequisite: audition.

Performance techniques and experience in ballroom dance.

390R. Ballet Technique 3. (1:0:3 ea.)

Prerequisite: Dance 291R or equivalent.

391R. Ballet Technique 4. (1:0:3 ea.)

Prerequisite: audition.

393R. Ballet Pointe, Intermediate. (0.5:0:2

ea.) Prerequisite: audition or Dance 293R or equivalent.

396. Ballet Methodology. (2:2:2) Prerequisite: Dance 390R or equivalent.

Teaching classical ballet from preballet through advanced; includes analysis of Bournonville, Cecchetti, Vaganova, RAD, and SAB methods.

399R. Cooperative Education: Dance Internship. (1-4:0:50 ea.)

426R. Music Dance Theatre: Senior Performance Project. (1:0:5 ea.) Prerequisite: ThF 361; concurrent registration in Music 426R and ThF 426R.

429R. Dance Performance 2. (1-3:Arr.:Arr. ea.) Prerequisite: consent of production director.

Participation as dancers in concert dance production.

440R. Modern Dance Technique and Theory 4. (2.5:0:7.5 ea.) Prerequisite: Dance 340R or equivalent.

460. Dance History 1. (2:2:0)

Tribal cultures, ancient, and medieval historical periods.

461. Dance History 2. (2:2:0)

Renaissance through modern historical periods.

464. Dance Accompaniment. (1:1:1)

Prerequisite: Dance 364.

466. Dance Teaching Practicum. (1:1:2)

Pre-student teaching course giving students practical teaching experience in a mentored environment. A discussion lab integrates theory and experience.

468R. Modern Dance Performance

Company. (2:0:6 ea.) Prerequisite: audition. Performance techniques and experience with The Dancers' Company.

469. Senior Seminar in Dance. (2:1:2)

478R. Folk Dance Performance Company.

(1:0:3 ea.) Prerequisite: audition.

Performance techniques and experience with International Folk Dance Ensemble.

484R. Theory and Notation of International

Style Ballroom Dance. (2:2:2 ea.)

Prerequisite: Dance 384R, 385R.

Study of theory and notation of International Ballroom Dance and preparation for Professional Teaching Certification Examinations.

488R. Ballroom Dance Performance

Company. (2:0:3 ea.) Prerequisite: audition.

Performance techniques and experience with BYU Ballroom Dance Team.

490R. Ballet Technique 5. (2.5:0:2.5 ea.)

Prerequisite: audition.

493R. Ballet Pointe, Advanced. (0.5:0:1 ea.)

Prerequisite: Dance 393R or equivalent.

494R. Ballet Variations. (0.5:0:2 ea.)

Prerequisite: Dance 391R and 393R or equivalents.

495R. Pas de Deux. (0.5:0:1 ea.) Prerequisite: audition.

Ballet partnering techniques.

498R. Ballet Performance Company.

(2:0:Arr. ea.) Prerequisite: audition and concurrent registration in Dance 391R and 490R; 493R (females only) or 494R.

Performance technique and experience with BYU Theatre Ballet.

Advanced Undergraduate or Graduate Courses

500R. Workshop in Dance. (1-3:1:6 ea.)

Experience with Workshop in Dance: aerobic, ballet, ballroom, folk, modern.

540R. Modern Dance Technique and Theory

5. (2:0:5 ea.) Prerequisite: Dance 340R or instructor's consent.

Advanced technique, with movement combinations emphasizing dance as a performance art.

555. Dance Production. (2:2:2) Prerequisite: Dance 355 or equivalent.

Technical aspects of dance production.

562R. Modern Dance Composition, Advanced. (1:0:4 ea.) Prerequisite: Dance 362 or instructor's consent.

Development of substantive modern dance compositional works based on intent, form, and content relationships.

563R. Modern Dance Improvisation, Advanced. (1:0:4 ea.) Prerequisite: Dance 363 or instructor's consent.

599R. Cooperative Education: Dance Practicum. (1-6:0:50 ea.)

Field experience for teaching and performance in dance.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

601. Introduction to Graduate Studies in Dance. (1:1:0)

610. Research Methods in Dance. (3:3:0)

630R. Dance Technique, Advanced.

(1-2:0:Arr. ea.)

638R. Dance Performance. (1-2:0:7.5 ea.)

640. Creativity. (1:1:0)

641. Cultural Aspects of Dance. (1:1:0)

642. Current Trends in Dance. (1:1:0)

643. Dance Aesthetics. (1:1:0)

650. Dance Criticism. (2:2:0)

651. Dance Pedagogy. (2:2:0)

652. Exploration of Dance Therapies. (2:2:0)

653. Movement Analysis Systems. (2:2:0)

660. Dance Composition—Theory and Principles. (2:2:0)

661. Dance Improvisation—Theory and Principles. (2:2:0)

662. Dance Performance—Theory and Principles. (2:2:0)

663. Dance Technique—Theory and Principles. (2:2:0)

695R. Dance and Related Fine Arts. (1-4:Arr.:Arr. ea.)

697R. Individual Research and Composition in Dance. (1-4:Arr.:Arr. ea.)

698R. Master's Project. (1-6:0:0 ea.)

699R. Master's Thesis. (1-6:0:0 ea.)

Danish

See Germanic and Slavic Languages.

Design

Robert Barrett, Chair (210 BRMB)

Professors

Cindrich, Lawrence A. (1983) BFA, Carnegie Mellon U., 1959; MFA, Cranbrook Academy of Art, 1961.

Stout, W. Douglas (1969) BFA, U. of Utah, 1958; MS, Illinois Inst. of Technology, 1961; PhD, U. of Utah, 1977.

Associate Professors

Barrett, Robert (1982) BFA, U. of Utah, 1973; MA, MFA, U. of Iowa, 1975, 1976.

Barrus, Wallace M. (1969) BS, Brigham Young U., 1964; MFA, Utah State U., 1975.

Marshall, John F. (1971) BFA, MA, Brigham Young U., 1966, 1968.

Pulfer, Adrian (1985) BFA, Brigham Young U., 1988.

Assistant Professors

Adams, Brent (1990) MFA, U. of Utah, 1992.

Hull, Richard (1987) BFA, Brigham Young U., 1987.

Nielson, Karla (1974) BA, MA, Brigham Young U., 1974, 1979.

Sipherd, John W. (1976) BS, Utah State U., 1962; MA, California State U., Los Angeles, 1964.

Stimpson, Miriam (1973) BS, MA, Brigham Young U., 1966, 1972.

Taylor, David A. (1978) BA, MA, Brigham Young U., 1972, 1976, 1982.

Telford, John (1990) MFA, U. of Utah, 1988.

Instructors

Heaton, Pattie (1973) BA, Brigham Young U., 1973.
Heiner, Gloria (1978) BA, Brigham Young U., 1976.
Mead, Sherrill (1976) BA, U. of Oregon, 1966; BA, Brigham Young U., 1977.
Sullivan, Linda (1991) BFA, Brigham Young U., 1981.
Viehweg, Ross (1969) BA, BS, Rice U., 1957, 1957.

Special Instructors

Ralph Barksdale, Julee Braithwaite, Milo Baughman, Rob Calvin, Gary Capp, Doug Fryer, Jim Knight, Lynn Lemone, Ken Lindquist, Frank Nackos, Robert Olsen, Wilson Ong, Kevin Scholz, Shari Warnick.

Emeriti

Allen, Phyllis Sloan (1968) BA, U. of California, Berkeley, 1931.
Dansie, R. E. (Ted) (1972) BA, Brigham Young U., 1972.

Programs and Degrees

BA	Design
BFA	Graphic Design
BFA	Illustration
BFA	Industrial Design
BFA	Interior Design
BFA	Photography

Graduates of the design programs obtain positions in several areas of special focus. All of the design disciplines share a common basis and vocabulary in the elements and principles of design, and each requires the ability to think and communicate visually.

Application Procedures for New Students

New students are accepted only at the beginning of the fall semester or spring term. Enrollment is limited and based on several qualifications:

1. University and college admissions standards.
2. Drawing and design exercises that demonstrate an acceptable measure of skill and creative ability.
3. Completion of biographical and background information forms.
4. Examples of two- and three-dimensional design compositions, drawings, paintings, or photographs created by the applicant.

Appropriate forms and explanations of exercises are contained in an application packet available from the department office (210 BRMB) at the beginning of winter semester.

Freshman Enrollment Fall Semester

Application packets must be obtained before February 28 and returned before March 31. Individuals will be notified whether or not they have been approved by April 30.

Freshman Enrollment Spring Term

Application packets must be obtained before January 15 and returned by February 15.

Individuals receiving notice of acceptance will be permitted to register for Des 100, 110, 111, and 112 foundations courses spring term or fall semester. Des 113, 114, and 119 are foundation courses offered during winter semester and summer term. Des 110 and 111 require concurrent enrollment.

Foundation (Core)

The above 100-level foundation courses constitute the foundation *core*. These are prerequisite to admission into sophomore-level degree program courses for BFA majors and BA design majors.

Sophomore Through Senior BFA Degree Program Enrollment

Permission to enroll for sophomore-through-senior-level BFA degree program courses is granted to students upon satisfactory development of skills and creative abilities demonstrated in a portfolio of drawings and designs completed during the preceding year. Faculty from each degree program (major) will assess portfolios of work submitted by students wishing to advance in their respective fields of study. Students invited to continue are permitted to enroll in specified courses at the next academic level.

Students not accepted into BFA degree programs may elect to enroll in the Bachelor of Arts Design Program.

Degree Program Coordinators/Advisors for the Design Department

Four coordinators are appointed to counsel students in these programs:

1. Visual communications design, which includes graphic design, illustration, and photography.
2. Industrial design.
3. Interior design.
4. BA design.

Coordinators will advise students about program objectives, course content and sequence, career goals, and other matters pertaining to their major field of study.

College Advisement Center

Brenda Butterfield, Supervisor (D-444 HFAC)

Design students will find it necessary to consult with personnel in the College of Fine Arts and Communications Advisement Center about general university academic requirements and elementary design education program concerns.

Special Notice

Students receiving C or lower grades in 300- or 400-level courses will be placed on department probationary status.

No D grade in department courses and required support courses will be applied toward graduation for BFA and BA majors.

Lab Fees

Lab fees must be paid for several courses to cover the cost of essential materials and supplies. Refer to the current BYU Class Schedule for a list of courses requiring fees.

Design Department Probationary Status

Students can be placed on probationary status for the following:

1. Inadequate academic performance.
2. Unprofessional attitude and lack of commitment.
3. BYU Honor Code violations.

Program Requirements

BA Design

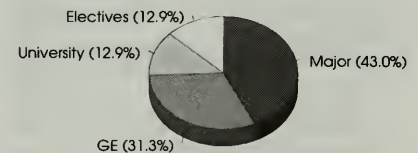
In addition to the foundation *core*, BA majors will be required to complete the following courses in the department.

- I. Sophomore-level courses: Des 210, 220, 230, 245, 250, 270.
- II. Junior-level courses: Des 315, plus five courses from Des 328, 329, 349, 359, 379.
- III. Senior-level course: Des 415.

An additional 9 hours of credit in approved support courses in art, business, computer science, or advertising will be required. Consult with the BA design advisor to arrange individual programs of study.

Returned missionaries, transfer students from other departments at BYU or from other institutions, and individuals who demonstrate exceptional creative abilities and/or skills by virtue of experience may appeal to the department by portfolio review for admission after published registration deadlines.

Summary of Degree Requirements for BA Design



1. Total hours	128.0
2. Major hours	55.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5

5. Elective hours 16.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

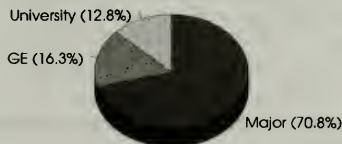
★Note: Hours do not include any course that could be used to fill GE or university requirements.

BFA Graphic Design

Graphic designers create visual images for companies, institutions, or individuals. The skill and creativity of the designers are needed to make the images elicit an appropriate response from the public.

- I. Foundation Core: Des 100, 110, 111, 112, 113, 114, 119 are prerequisite to all sophomore-level courses.
- II. Major courses:
 - A. Des 210, 243, 245, 250, 270.
 - B. Des 340, 341, 342, 343, 344.
 - C. Des 441, 442, 443, 444, 497R (5 hours).
- III. Support courses:
 - A. Art 211, 212, 310.
 - B. Two courses from Comms 230, Des 348, 351, 352.
 - C. Three courses from Des 488, IS 564, OrgB 320, BusM 340.
 - D. Three courses from Des 310, 328, 329, 339, 349, 359, 379, 410R.

Summary of Degree Requirements for BFA Graphic Design



1. Total hours 128.5
2. Major hours 91.0
3. General Education requirements 21.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 0.0
 - Advanced Math/Foreign Language 0.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 0.0
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

credits substantially increases the cost and the number of semesters to graduate.

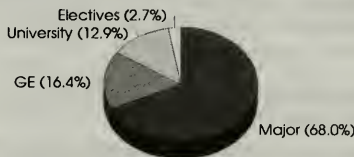
★Note: Hours do not include any course that could be used to fill GE or university requirements.

BFA Illustration

Illustrators find career opportunities creating illustrative art for advertising, book, institutional, editorial, and many other areas of design. The illustrations are created to communicate an idea visually to the viewer and enhance the appeal of the design being illustrated.

- I. Foundation core: Des 100, 110, 111, 112, 113, 114, 119.
- II. Major courses:
 - A. Des 210, 243, 245, 250, 270.
 - B. Des 350R, 351, 352, 353, 354.
 - C. Des 451, 452, 453, 454, 488, 497R (5 hours).
- III. Support courses:
 - A. Art 211, 212, 214, 215.
 - B. Three courses from Art 310, Des 328, 329, 339, 349, 359, 379.
 - C. 6 hours from Art (218, 219), 328R, 333R, Des 344, 348, 450.

Summary of Degree Requirements for BFA Illustration



1. Total hours 128.0
2. Major hours 87.0
3. General Education requirements 21.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 0.0
 - Advanced Math/Foreign Language 0.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 3.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

★Note: Hours do not include any course that could be used to fill GE or university requirements.

BFA Industrial Design

Industrial designers are involved in the creation of all the objects that facilitate daily living. This requires knowledge of manufacturing processes and user expectations and the ability to bring them together in an aesthetically pleasing product.

- I. Foundation core: Des 100, 110, 111, 112, 113, 114, 119.
- II. Major courses:
 - A. Des 199R, 210, 214R, 230, 231, 232, 233.
 - B. Des 310, 315, 329, 330, 331, 332, 339, 340, 341, 372.
 - C. Des 410R, 415, 430, 488, 489, 497R (4 hours).
- III. Support courses:
 - A. Art 111, 311, TecE 240.
 - B. Two courses from Des 220, 245, 250, 270.
 - C. One course from Des 328, 349, 359, 379.

Summary of Degree Requirements for BFA Industrial Design



1. Total hours 128.5
2. Major hours 91.0
3. General Education requirements 21.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 0.0
 - Advanced Math/Foreign Language 0.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 0.0
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

★Note: Hours do not include any course that could be used to fill GE or university requirements.

BFA Interior Design

Interior designers are involved in the creation of residential, commercial, and institutional environments. Successful interior designs are well researched and thoughtfully developed to be responsive to human needs, as well as to be aesthetically pleasing.

- I. Foundation core: Des 100, 110, 111, 112, 113, 114, 119.

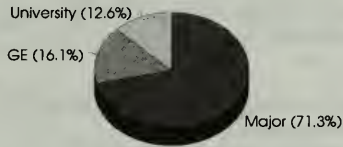
II. Major courses:

- A. Des 199R, 210, 220, 221R, 222, 223, 224, 225, 226, 227R.
- B. Des 310, 315, 320, 321R, 322, 324, 325, 326, 328, 329.
- C. Des 415R, 420R, 422R, 488, 497R (4 hours).

III. Support courses:

- A. Two courses from Des 327, 335R, 341, 384R, 410R, 411R, 499R, Psych 359, Acc 200, BusM 340, OrgB 320.
- B. Two courses from Des 230, 245, 250, 270.
- C. Three courses from Des 339, 349, 359, 379.

Summary of Degree Requirements for BFA Interior Design



1. Total hours	130.5
2. Major hours [♦]	93.0
3. General Education requirements	21.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	0.0
Advanced Math/Foreign Language	0.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

[♦]Note: Hours do not include any course that could be used to fill GE or university requirements.

BFA Photography

Photographers are communicators who create expressive images that help to visualize a wide range of thoughts. These images are produced for art directors, publishers, graphic designers, packagers, or any who need to visually express concepts and ideas.

I. Foundation core: Des 100, 110, 111, 112, 113, 114, 119.

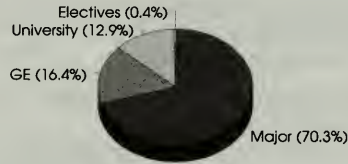
II. Major courses:

- A. Des 210, 245, 250, 270, 272, 273.
- B. Des 315, 372, 374, 375, 376, 377R.
- C. Des 477R, 497R (6 hours), 499R.

III. Support courses:

- A. Art 211, 212, Comms 201, 365R.
- B. Three courses from Comms 230, 235, BusM 340, OrgB 320, TecE 250, 453.
- C. Three courses from Des 310, 328, 329, 339, 349, 359, 379, 410R.

Summary of Degree Requirements for BFA Photography



1. Total hours	128.0
2. Major hours [♦]	90.0
3. General Education requirements	21.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	0.0
Advanced Math/Foreign Language	0.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

[♦]Note: Hours do not include any course that could be used to fill GE or university requirements.

Design (Des)

Undergraduate Courses

100. Design in Society. (2:2:0)

The impact of various design disciplines on contemporary society.

102. Introduction to Interiors. (3:3:0)

Interior design; focuses on history and development of the American home.

110. Introduction to Computer Applications. (2:0:2) Prerequisite: concurrent registration in Des 111.

Basic computer operations as used in design.

111. Two-dimensional Design Studio. (2:2:2) Prerequisite: concurrent registration in Des 110.

Basic principles and elements of design that condition organization of form, expressed in two-dimensional application and presentation.

112. Foundation Drawing. (2:2:2)

Drawing by visual analysis and imaginative concepts using perspective systems and various media.

113. Three-dimensional Design Studio. (2:2:2)

Continuation of Des 111 with three-dimensional application and presentation.

114. Figure Drawing. (2:2:2) Prerequisite: Des 111, 112.

Drawing from a live model; focus on figurative expressions of human form using various media.

119. Color in Design. (2:2:2) Prerequisite: Des 111, 112.

Theories of color, their application, and psychological impact.

199R. Cooperative Education. (1-3:Arr:Arr. ea.) Prerequisite: admission by portfolio.

Work experience evaluated by supervisor and posted on student's transcript.

210. Intermediate Computer Applications. (2:0:2) Prerequisite: foundation core.

Beginning experiences with application programs in various design disciplines.

214R. Shop Methods and Materials. (2:3:1 ea.) Prerequisite: foundation core.

Introduction to simple hand and machine tools; basic woodworking and metalworking construction. Fee.

220. Introduction to Interior Design. (2:2:2) Prerequisite: foundation core.

Introductory, practical experiences based on elements and principles of interior design.

221R. Presentation Methods for Interior Design 1. (2:2:2 ea.) Prerequisite: foundation core.

Various media skills for rendering and presentation.

222. Interior Design Studio 2. (3:3:3)

Prerequisite: Des 220.

Interior design; emphasizes aesthetics, programming, and residential design.

223. Materials and Components. (2:2:0)

Prerequisite: foundation core.

Hard surface materials and their specification and application in interiors.

224. Interior Textiles. (2:2:0) Prerequisite: Des 115, 119.

Technical, practical, and aesthetic considerations of soft material and textile specification and applications in interiors.

225. Detailing for Interiors 1. (3:3:3)

Prerequisite: foundation core.

Detailing and drafting for interiors using traditional mechanical means.

226. Detailing for Interiors 2. (3:3:3)

Prerequisite: Des 225.

Continuation of Des 225.

227R. Presentation Methods for Interior Design 2. (2:2:2 ea.) Prerequisite: Des 221R.
Presentation methods emphasizing quick rendering techniques in a variety of styles and media.

230. Introduction to Industrial Design. (2:2:2) Prerequisite: foundation *core*.
Introduction to industrial design research, analysis, and problem-solving methods. Fee.

231. Presentation Methods for Industrial Design 1. (2:2:2) Prerequisite: foundation *core*.
Product presentation methods emphasizing perspective, value, scale, accuracy, and color.

232. Industrial Design Studio. (3:3:3) Prerequisite: Des 230, 231.
Continuation of Des 230 emphasizing human factors and ergonomics, restrictions and possibilities of materials and manufacturing, and coherent presentation of problems, processes, and ideas. Fee.

233. Presentation Methods for Industrial Design 2. (2:2:2) Prerequisite: Des 231.
Continuation of Des 231.

243. Basic Typography. (3:3:1) Prerequisite: Des 245.

Tools and techniques employed in indicating type and pictorial elements. Solving visual problems with type.

245. Introduction to Graphic Design. (2:2:2) Prerequisite: foundation *core*.

Using tools and preparing camera-ready mechanicals. Comprehensive study of current typesetting, printing, and binding methods; manufacture and uses of printing papers.

250. Introduction to Illustration Design. (2:2:2) Prerequisite: foundation *core*.
Overview of styles, techniques, methods, and materials. Illustrative concepts and problem solving.

270. Introduction to Photographic Design. (3:3:2) Prerequisite: foundation *core*.

Basic camera and photographic techniques; emphasizes black and white photography. Lab required. Fee.

272. Introduction to Color Photography. (3:2:3) Prerequisite: Des 270.

Basics of making color negatives and transparencies; darkroom techniques in printing from color negatives. Fee.

273. Advanced Photography. (3:2:3) Prerequisite: Des 270.
Camera and darkroom techniques using the zone system for exposure and development control of negatives and prints. Lab required. Fee.

310. Advanced Computer Applications. (2:0:2) Prerequisite: Des 210.
Specific program applications of computers to design disciplines.

315. Seminar in Design. (2:2:0) Prerequisite: sophomore *core*.

Readings in various philosophical approaches to design.

320. Interior Design Studio 3. (3:3:3) Prerequisite: Des 222.

Emphasizes space planning, rendering, and nonresidential design.

321R. Interior Presentation Techniques 3. (2:2:2 ea.) Prerequisite: Des 227.
Continuation of Des 227.

322. Interior Design Studio 4. (3:3:3) Prerequisite: Des 320.
Synthesis of research, design, and presentation skills in nonresidential design.

324. Building Systems. (2:2:0) Prerequisite: Des 222.
Construction processes and building codes; structural, HVAC, plumbing, and electrical systems; acoustics; energy conservation.

325. Lighting Techniques. (2:2:0) Prerequisite: foundation *core*.
Lighting techniques and specifications for interiors.

326. Detailing for Interiors 3. (2:2:2) Prerequisite: Des 226.
Research and development of custom details for interiors.

327. Presentation Models. (2:2:2) Prerequisite: BFA acceptance.
Interior architecture model-making techniques.

328. History of Interior Design and Architecture 1. (3:3:0)
History of interior design, architecture, and furnishings from ancient Egypt to Beaux Arts movement. French, English, and American design.

329. History of Interior Design and Architecture 2. (3:3:0)
Furniture, interior design, and architecture from Industrial Revolution to present.

330. Industrial Design Studio 3. (3:3:3) Prerequisite: Des 232, 233.

Designer responsibilities, structured and unstructured procedures in problem solving, client relationships, functional relationships, and mechanisms and materials. Fee.

331. Presentation Methods for Industrial Design 3. (2:2:2) Prerequisite: Des 231.
Sketching and rendering techniques focused on surface materials and finishes.

332. Industrial Design Studio 4. (3:3:3) Prerequisite: Des 330, 331.
Continuation of Des 330 with renewed emphasis on human factors and ergonomics, plus market and user requirements and developing written briefs. Fee.

333R. Presentation Methods for Industrial Design 4. (2:2:2 ea.) Prerequisite: Des 331.

Continuation of Des 331 emphasizing representation of highly developed products and surface finishes.

335R. Introduction to Furniture Design. (3:2:4 ea.) Prerequisite: foundation *core*.
Materials, structures, and production methods; prototype construction.

339. History of Products. (3:3:0) Prerequisite: foundation *core*.
Overview of artifacts and products; how they have influenced society from prehistory to present day.

340. Corporate Identity Design. (3:3:3) Prerequisite: Des 243 and BFA acceptance.
Current philosophy in corporate identification and trademark design. Design trademarks, logo-types, and identity programs.

341. Packaging Design. (3:3:3) Prerequisite: BFA acceptance.
Packaging and its function in the marketplace; current packaging technology and aesthetics.

342. Advertising Design. (3:2:2) Prerequisite: BFA acceptance.
Particular demands of the advertising world: marketing strategy, editorial and visual concepts, etc. Design ads, collateral materials, campaigns.

343. Publication Design. (3:2:2) Prerequisite: BFA acceptance.
Book and magazine publishing and their special editorial, design, and manufacturing requirements.

344. Poster Design. (3:3:3) Prerequisite: BFA acceptance.
Functions and characteristics of posters; past and current aesthetics. Fee.

348. Type as Image. (3:2:2) Prerequisite: BFA acceptance.
Developing unique and expressive letterforms, especially the modification of letters to create new abstract or pictorial images.

349. History of Graphic Design. (3:3:0) Prerequisite: foundation *core*.
Survey of visual communication.

350R. Life Drawing. (3:3:3) Prerequisite: BFA acceptance.
Drawing the figure in modern or historical costume; developing drawing skills, especially relating to the draped figure.

351. Illustration 2. (3:3:3) Prerequisite: BFA acceptance.
One- and two-color media (line and continuous tone); various techniques and styles; design assignments.

352. Illustration 3. (3:3:3) Prerequisite: BFA acceptance.

Illustrative assignments using black and white and color mediums: transparent and opaque watercolors, inks, dyes, pastels, etc.

353. Editorial and Book Illustration. (3:3:3) Prerequisite: BFA acceptance.

Book and magazine illustration and philosophy; design and manufacturing requirements; design assignments.

354. Advertising and Corporate Illustration. (3:3:3) Prerequisite: BFA acceptance.

Demands of the advertising world; institutional illustration and ad campaigns; design assignments.

359. History of Illustration. (3:3:0)

Prerequisite: freshman core.

Survey of illustration in visual communication. Emphasis on birth of publishing and "Golden Age" of American illustration.

372. Illustration Photography. (3:2:3)

Prerequisite: BFA acceptance.

Camera and darkroom techniques to produce illustrations for advertising layout and other media. Lab required. Fee.

374. Architectural Photography. (3:2:3)

Prerequisite: BFA acceptance.

Photographing architectural exteriors and interiors, emphasizing use of the view camera. Lab required. Fee.

375. Portrait Photography. (3:2:3)

Prerequisite: BFA acceptance.

Studio and environmental portraiture. Lab required. Fee.

376. Multi-Image Production. (3:2:3)

Prerequisite: BFA acceptance.

Producing photography, graphics, and sound for multi-image productions, emphasizing use of computerized programmers. Lab required.

377R. Advanced Photography Studio. (3:3:3 ea.) Prerequisite: BFA acceptance.

Photography as an exploratory, sensitizing process. Lab required. Fee.

379. History of Photography. (3:3:0)

Prerequisite: foundation core.

Origin and development of photographic process.

384R. Problems in Color. (2:2:2 ea.)

Prerequisite: foundation core.

Specialized applications of color theory.

410R. Computer Applications Studio. (2:0:2 ea.) Prerequisite: Des 310.

Individual major project using high-end hardware and software.

411R. Field Study. (1-3:Arr.:Arr. ea.)

Prerequisite: instructor's consent.

On-location study of design.

415R. Practicum in Design. (2:2:2 ea.)

Prerequisite: instructor's consent.

Team projects using expertise of the various BFA degree program faculty.

420R. Interior Design Studio 5. (3:3:3 ea.)

Prerequisite: Des 322.

Interior design, emphasizing comprehensive research and planning of nonresidential interiors.

421R. Interior Presentation Techniques 4. (3:2:4 ea.) Prerequisite: Des 321R.

Continuation of Des 321R.

422R. Interior Design Studio 6. (1-3:Arr.:Arr. ea.) Prerequisite: instructor's consent.

National and international design competitions.

427. Interior Presentation Techniques 5. (2:2:2) Prerequisite: Des 421R.

Continuation of Des 421R.

430. Industrial Design Studio 4. (3:3:1)

Prerequisite: Des 332, 333.

Systems design problems from initial research and analysis to final presentation of working drawings and models, with concern for ergonomics, anthropometrics, marketing, user and buyer, production, function, and structure. Fee.

432. Industrial Design Studio 5. (3:3:3)

Prerequisite: Des 330, 332, 430.

Portfolio development based on advanced design projects.

435R. Advanced Furniture Design. (3:2:4 ea.)

Prerequisite: Des 335R.

Continuation of Des 335R.

441. Senior Graphic Design Studio 1. (3:3:3)

Prerequisite: BFA acceptance.

Opportunity for senior class members to work as a group in solving design problems for real clients on major projects.

442. Senior Graphic Design Studio 2. (3:3:3)

Prerequisite: Des 441.

Continuation of Des 441.

443. Special Problems in Graphic Design 1. (3:3:3) Prerequisite: BFA acceptance.

Advanced assignments in graphic design; individual portfolio development.

444. Special Problems in Graphic Design 2. (3:3:3) Prerequisite: BFA acceptance.

Continuation of Des 443.

450. Painting the Human Head. (3:3:3)

Prerequisite: Des 350 and BFA acceptance.

Painting from live model; concentrates on unique aspects of portraiture and colors of the human face.

451. Senior Illustration Studio 1. (3:3:3)

Prerequisite: Des 351, 352, and BFA acceptance.

Individual portfolio development.

452. Senior Illustration Studio 2. (3:3:3)

Prerequisite: Des 451.

Flexible in nature, featuring various instructors with unique individual skills. Team taught.

453. Illustration 4. (3:3:3) Prerequisite: Des

351, 352, and instructor's consent.

Advanced assignments in illustration.

454. Illustration 5. (3:3:3) Prerequisite: Des

351, 352, and instructor's consent.

Continuation of Des 453.

477R. Advanced Photography Studio 2. (3:3:3 ea.) Prerequisite: Des 377.

Advanced assignments in photography. Fee.

488. Professional Practices of the Designer. (2:2:0) Prerequisite: advanced standing.

Business aspects of the design profession.

489. Portfolio Preparation. (2:1:1)

Final portfolio preparation.

494R. Special Problems in Design. (1-3:Arr.:Arr. ea.) Prerequisite: instructor's consent.

Individual study in area of special interest.

497R. BFA Final Project. (1-3:Arr.:Arr. ea.)

Prerequisite: consent of BFA advisor.

Advanced individual project with minimum guidance, showing high degree of competence within chosen major.

499R. Directed Studies. (1-6:Arr.:Arr. ea.)

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

610R. Advanced Problems in Design. (1-8:Arr.:Arr. ea.)

630R. Advanced Design Problems in Industrial Design. (1-8:Arr.:Arr. ea.)

631R. Advanced Presentation Methods for Industrial Design. (1-8:Arr.:Arr. ea.)

640R. Advanced Problems in Graphic Design. (1-5:Arr.:Arr. ea.)

644R. Advanced Problems in Illustration. (1-5:Arr.:Arr. ea.)

Dutch

See Germanic and Slavic Languages.

Economics

Richard J. Butler, Chair (129 FOB)

Professors

Butler, Richard J. (1982) BA, U. of Utah, 1973; MA, PhD, U. of Chicago, 1979.

Jensen, Farrell E. (1982) BS, Utah State U., 1964; MS, PhD, Kansas State U., 1966, 1972.

Kearl, J. R., (1975) BA, Utah State U., 1971; PhD, Massachusetts Inst. of Technology, 1975.

- McDonald, James B. (1972) BS, MS, Utah State U., 1964, 1967; PhD, Purdue U., 1970.
- Park, William Laird (1977) BS, MS, Utah State U., 1957, 1958; PhD, Cornell U., 1963.
- Pope, Clayne L. (1970) BA, Brigham Young U., 1965; MA, PhD, U. of Chicago, 1968, 1972.
- Pope, Rulon D. (1982) BS, Brigham Young U., 1971; PhD, U. of California, Berkeley, 1976.
- Spencer, David E. (1986) BA, Brigham Young U., 1971; MS, PhD, Texas A&M U., 1973, 1974.
- Wimmer, Larry T. (1963) BS, Brigham Young U., 1960; MA, PhD, U. of Chicago, 1962, 1968.

Associate Professors

- Lambson, Val E. (1989) BA, Brigham Young U., 1979; MA, PhD, U. of Rochester, 1982, 1983.
- Pope, C. Arden, III (1984) BS, Brigham Young U., 1978; MS, PhD, Iowa State U., 1981.
- Ransom, Michael R. (1988) BA, Brigham Young U., 1977; MA, PhD, Princeton U., 1980, 1983.

Assistant Professors

- Manning, Richard L. (1990) BA, Brigham Young U., 1982; MA, PhD, U. of Chicago, 1984, 1989.
- Pender, John (1992) BS, California Institute of Technology, 1978; MPP, U of California, Berkeley, 1983; PhD, Stanford U., 1992.
- Phillips, Kerk L. (1992) BS, Brigham Young U., 1986; MA, PhD, U. of Rochester, 1990, 1991.
- Showalter, Mark (1991) BA, Brigham Young U., 1986; PhD, MIT, 1991.

Emeriti

- Clark, Wayne Walter (1962) BA, Brigham Young U., 1952; PhD, Texas A&M U., 1960.
- Corbridge, Ivan L. (1952) BA, Utah State U., 1946; MS, U. of Chicago, 1948; PhD, Washington State U., 1952.
- Doxey, Willard B. (1956) BS, MS, U. of Utah, 1937, 1947; PhD, U. of California, Berkeley, 1956.
- Dutton, Dean S. (1968) BA, U. of Utah, 1964; MA, PhD, Michigan State U., 1966, 1968.
- Gardner, B. Delworth (1986) BS, MS, U. of Wyoming, 1952, 1954; PhD, U. of Chicago, 1960.
- Infanger, Carlton A. (1964) PhD, Montana State U., 1964.
- James, Sydney C. (1983) BS, MS, Utah State U., 1953, 1957; PhD, Oregon State U., 1960.
- Nelson, Glen T. (1955) BS, MS, Utah State U., 1942, 1948; PhD, U. of Illinois, 1950.

Programs and Degrees

- BS Economics
Emphasis (optional):
Agricultural Economics
- BA Economics
- BA Economics Teaching

An undergraduate major in economics should enable students to think more clearly and carefully about the social, political, and economic environment in

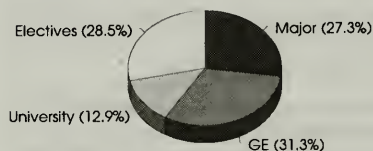
which they live and function as consumers, producers, and voters. Economics is concerned with the behavior and interaction of individuals, families, business firms, and governments.

The study of economics provides excellent preparation for entrance into many graduate programs or professional careers, such as law, business (MBA, DBA, MPA, or MOB), economics, government service, or education.

Note: The department currently does not accept students into the master's program.

Program Requirements**BS Economics**

- I. Major courses: Econ 110, 380, 381, 382, 388, and 15 additional hours in economics. At least 12 hours must be from courses 410 through 588.
- II. Supporting courses: Stat 321; Math 112 and 113, or 119. (Math 112, 113 recommended for students contemplating graduate work in economics.)
- III. No more than 3 hours of D credit in courses used to fulfill major requirements.

Summary of Degree Requirements for BS Economics

- | | |
|--|-------|
| 1. Total hours | 128.0 |
| 2. Major hours* | 35.0 |
| 3. General Education requirements | 40.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 7.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 36.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Agricultural Economics Emphasis

The agricultural economics emphasis provides preparation for careers in

agriculture or related sectors of the economy or government. It also prepares one well for further graduate study in agricultural economics, business, or law.

I. Major courses: Econ 110, 380, 381, 382, 388.

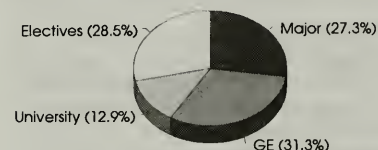
II. Supporting courses: Stat 321; Math 112 and 113, or 119. (Math 112, 113 recommended for students contemplating graduate work in agricultural economics.)

III. Emphasis courses: Econ 410, 440, 460.

IV. 6 additional hours in economics. At least 3 hours must be from courses 413R through 588. Elective courses might include 230 or 430; 450; 257 or 458; and 253 or 453.

V. No more than 3 hours of D credit in courses used to fulfill major requirements.

VI. Students interested in agribusiness may wish to minor in business management.

Summary of Degree Requirements for Agricultural Economics Emphasis

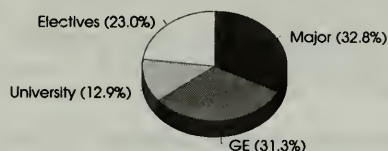
- | | |
|--|-------|
| 1. Total hours | 128.0 |
| 2. Major hours* | 35.0 |
| 3. General Education requirements | 40.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 7.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 36.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA Economics

In addition to BS requirements: Completion of GE foreign language requirement or 7 hours of mathematics in addition to Math 112 or 119.

Summary of Degree Requirements for BA Economics



1. Total hours	128.0
2. Major hours ♦	42.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	29.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

- I. After completing Econ 110 and the prerequisites for calculus:
 - A. First semester: Math 112 or 119 (calculus) plus one 200-level field course.
 - B. Second semester: Econ 380, 381, plus one or more 400-level field courses.
 - C. Third semester: Econ 382, Stat 321, plus one or more 400- or 500-level field or theory courses.
 - D. Fourth semester: Econ 388 plus one or more 400- or 500-level field or theory courses.
 - E. Fifth semester: One or more 400- or 500-level field or theory courses.

II. Students should not take both a 200-level and a 400-level field course in the same area (e.g., Econ 274 and 474), although they are encouraged to take the 300- and 500-level theory courses (e.g., Econ 380 and 580).

BA Economics Teaching

See Economics in the Secondary Education section of this catalog.

Minor

- I. Econ 110, 280 or 380, and 381 plus 9 additional hours in economics.

II. No more than 3 hours of D credit in courses used to fulfill minor requirements.

Honors in Economics

Graduation with the designation "Honors in Economics and University Honors" requires successful completion of Econ 499R.

Advisement

The faculty are anxious to consult with majors as well as those contemplating economics as a major. Routine questions should be directed to the college advisement center, but questions regarding curriculum and career decisions should be directed to the faculty.

Economics (Econ)

Undergraduate Courses

110. Economic Principles and Problems. (3:3:0) Honors and Independent Study also.

Strengths and weaknesses of markets and governments for solving problems of social organization or conflict, including policy response to inflation, unemployment, pollution, poverty, growth, etc.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) Prerequisite: prior written consent of faculty advisor and department chair.

Not counted toward required major or minor hours.

210. Introduction to Agricultural Markets. (3:3:0) Prerequisite: Econ 110.

Economic principles, policies, practices, and problems in marketing agricultural products.

211. Economics of Agricultural Production. (3:3:0)

Application of economics to the operation of agricultural production systems, including planning, decision making, and adjustments for uncertainty.

213R. Topics in Economic Analysis. (1-3:Arr.:Arr. ea.) Prerequisite: Econ 110 or equivalent.

215. History of Economic Thought. (3:3:0) Prerequisite: Econ 110 or equivalent.

Development of economic doctrines from preclassical through contemporary economics. Contributions of individual writers and schools of thought.

230. Economic Development. (3:3:0) Prerequisite: Econ 110 or equivalent.

Problems and processes of economic growth and development, emphasizing less-developed nations.

235. Economics of World Food Policy. (3:3:0) Prerequisite: Econ 110.

Economic principles applied to world food markets; trade theory and policy; impact of international food policies on markets, hunger, comparative advantage, efficiency.

240. Introduction to Natural Resource and Environmental Economics. (3:3:0)

Applying basic economic principles to the proper allocation of natural resources; our relationship to the environment.

241. Comparative Economic Systems. (3:3:0) Prerequisite: Econ 110 or equivalent.

Economic models and principles; analysis and comparison of capitalist, market socialist, and centrally planned economic systems.

253. Money and Banking. (3:3:0)

Prerequisite: Econ 110 or equivalent.

Economic principles applied to monetary analysis and policy and the banking structure.

257. International Trade and Finance. (3:3:0) Prerequisite: Econ 110 or equivalent.

Economic analysis of the mechanisms, problems, institutions, and policies of trade among countries. Financial and monetary arrangements that facilitate trade.

260. Introduction to U.S. Food Policy. (3:3:0) Prerequisite: Econ 110.

Analysis of policies affecting agricultural efficiency and distribution.

273. European Economic History. (3:3:0) Prerequisite: Econ 110 or equivalent.

Origins and development of major economic institutions in Europe from medieval era to present time.

274. American Economic History. (3:3:0) Prerequisite: Econ 110 or equivalent.

Impact on households, firms, and government of America's transformation from a rural, agricultural colony to a major industrial nation.

275. Public Finance. (3:3:0) Prerequisite: Econ 110 or equivalent.

Economics of decision making in the public sector; cost-benefit analysis and efficiency-equity issues of taxation and expenditure policies.

280. Introduction to Economic Analysis and Reasoning. (3:3:0) Prerequisite: Econ 110 or equivalent. Not for majors or major credit.

Maximizing self-interest model of behavior and the environment, and constraints within which business and household decisions are made.

380. Intermediate Price Theory 1. (3:3:0) Prerequisite: Econ 110; calculus or concurrent registration.

Producer, consumer, and equilibrium theories; mathematical techniques of unconstrained and constrained optimization introduced and applied extensively.

381. Intermediate Macroeconomics. (3:3:0) Prerequisite: Econ 110.

Intermediate macroeconomic theory, emphasizing income, unemployment, and price-level analysis.

382. Intermediate Price Theory 2. (3:3:0)
Prerequisite: Econ 380.

Welfare theory, imperfect information, imperfect competition, uncertainty, externalities, and public goods.

388. Introduction to Econometrics. (4:4:0)
Prerequisite: Econ 380, Stat 321.

Mathematical and statistical techniques used in estimating, predicting, and testing hypotheses associated with quantifiable economic relationships.

410. Agricultural Markets. (3:3:0)
Prerequisite: Econ 380.

Application of supply and demand concepts to price determination and analysis in agricultural markets.

413R. Topics in Economic Theory. (1-5:Arr.:Arr. ea.) Prerequisite: Econ 380 and/or 381, depending on topic.

415. History of Economic Thought. (3:3:0)
Prerequisite: Econ 380, 381.

421. Law and Economics. (3:3:0) Prerequisite: Econ 380.

Common law allocative mechanisms (contract, tort, and property law) as alternatives to collective intervention when markets fail; consideration of economic logic of law.

430. Economic Development. (3:3:0)
Prerequisite: Econ 380, 381.

440. Economics and Natural Resources. (3:3:0) Prerequisite: Econ 380.

Economic theory applied to issues in natural resource development and use. Rent, common property situations, time and resource conversion and depletion, market failure, public choice theory, and rudimentary benefit/cost analysis.

450. Economics of Financial Markets. (3:3:0)
Prerequisite: Econ 380; Stat 321 or concurrent registration.

Theory of financial economics emphasizing capital markets, investment decisions, choice, capital asset pricing model, futures and options markets, efficient markets, and capital structures.

453. Theory of Money and Banking. (3:3:0)
Prerequisite: Econ 380, 381.

458. International Trade Theory and Applications. (3:3:0) Prerequisite: Econ 380; 386 or concurrent registration.

Analysis of the theory of exchange, specialization, and trade, focusing on nature of the allocational problem when distinct economies interact.

459. International Monetary Theory. (3:3:0)
Prerequisite: Econ 380, 381.

Monetary and macroeconomic aspects of international relations dealing primarily with short-run balance-of-payments disequilibrium and adjustments.

460. Economics of U.S. Food Policy. (3:3:0)
Prerequisite: Econ 380.

Analysis of public programs, policies, issues, external forces, and institutions that affect the agricultural industry.

463. Economics of the Labor Market. (3:3:0)
Prerequisite: Econ 380, 386; 388 or concurrent registration.

474. Topics in Economic History. (3:3:0)
Prerequisite: Econ 380, 388.

475. Theory of Public Finance. (3:3:0)
Prerequisite: Econ 380, Stat 321.

476. Industrial Organization. (3:3:0)
Prerequisite: Econ 380, 382; 388 or concurrent registration.

486. Mathematical Economics. (3:3:0)
Prerequisite: Econ 388 or concurrent registration.

Further development of optimization and comparative statics. Differential equations and dynamic analysis.

490. Senior Paper. (1:0:0) Prerequisite: instructor's consent.

495R. Smith Chair Lectures in Economics. (1-3:Arr.:0 ea.) Prerequisite: Econ 380, 381.

496R. Readings in Economics. (1-2:Arr.:0 ea.) Prerequisite: instructor's consent.
P/F grade only; maximum of 2 credit hours; 3 hours of reading per week required for each credit hour taken. Not counted toward required major hours.

499R. Honors Thesis. (1-6:0:0 ea.)
Prerequisite: instructor's consent.

Advanced Undergraduate or Graduate Courses

580. Advanced Price Theory. (3:3:0)
Prerequisite: Econ 380, 382 or equivalent.
Individual behavior and markets.

581. Advanced Macroeconomics. (3:3:0)
Prerequisite: Econ 380, 381, 382.
Income, unemployment, and price-level analysis.

582. Welfare Economics. (3:3:0) Prerequisite: Econ 380, 382 or equivalent.

General equilibrium theorems and considerations that must guide applied economic work and provide quantitative information on the effects of alternative policy measures.

586. Mathematical Economics. (3:3:0)
Prerequisite: Econ 380, 381, 382, or equivalent.
Mathematical modeling of economic behavior.

588. Econometrics. (3:3:0) Prerequisite: Econ 380, 381, 382, 388, Stat 321, or instructor's consent.

Theory and practice of economic measurement.

599R. Cooperative Education: Supervised Management and Training. (2-6:0:Arr. ea.)
Prerequisite: course work pertinent to proposed experience.

On-the-job experience. Improving ability to function in a particular phase of agribusiness management.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

610. Advanced Market and Price Analysis. (3:3:0)

613R. Topics in Economic Theory. (1-5:Arr.:0 ea.)

620. Advanced Agricultural Finance. (3:3:0)

621. Advanced Law and Economics. (3:3:0)

625. Applied Agricultural Production Economics. (3:3:0)

630. Advanced Economic Development. (3:3:0)

640. Advanced Economics and Natural Resources. (3:3:0)

653. Advanced Money and Banking. (3:3:0)

658. Advanced International Trade. (3:3:0)

659. Advanced International Monetary Theory. (3:3:0)

660. Advanced Agricultural Policy. (3:3:0)

663. Advanced Economics of the Labor Market. (3:3:0)

670. Advanced Experimental Economics. (3:3:0)

674. Advanced Topics in Economic History. (3:3:0)

675. Advanced Public Finance. (3:3:0)

676. Advanced Industrial Organization. (3:3:0)

698R. Master's Project. (1-3:0:Arr. ea.)

699R. Master's Thesis. (1-6:Arr.:Arr. ea.)

Education

Educational Leadership

Ivan Muse, Chair (310 MCKB)

Professors

Garfield, Rulon Roy (1978) BS, MA, PhD, U. of Utah, 1954, 1956, 1964.

Muse, Ivan D. (1970) BS, Brigham Young U., 1955; MEd, U. of Arizona, 1958; EdD, U. of Utah, 1966.

Ovard, Glen F. (1965) BS, MS, Brigham Young U., 1949, 1954; EdD, Stanford U., 1959.

Shute, R. Wayne (1974) BS, MEd, Brigham Young U., 1955, 1959; EdD, U. of Southern California, 1964.

Van Alfen, Curtis N. (1967) BS, MS, Utah State U., 1957, 1959; EdD, U. of Utah, 1967.

Wasden, F. Del (1971) BS, MEd, EdD, Brigham Young U., 1961, 1966, 1971.

Associate Professors

Butterfield, Dennie D. (1974) BA, Brigham Young U., 1955; MA, Fresno State Coll., 1962; EdD, U. of California, Los Angeles, 1972.

Webb, Clark D. (1966) BA, MA, Brigham Young U., 1964, 1966; PhD, U. of Texas, Austin, 1970.

Assistant Professors

Hite, Steven (1991) BS, MS, Brigham Young U., 1980, 1982; EdD, Harvard U., 1985.

Peterson, Erlend D. (1966) BS, MS, EdD, Brigham Young U., 1967, 1971, 1985.

Randall, Vance (1992) BS, MEd, Brigham Young U., 1975, 1978; PhD, Cornell U., 1989.

Emeriti

Andersen, Dan W. (1980) BS, U. of Utah, 1952; MS, U. of Southern California, 1955; PhD, U. of Wisconsin, Madison, 1961.

Christensen, Dean C. (1957) BS, MS, Utah State U., 1938, 1948; EdD, U. of Oregon, 1957.

Clarke, Alva John (1983) BS, MS, Brigham Young U., 1938, 1942; EdD, Colorado U., 1950.

Harms, Callis R. (1960) BS, MEd, Brigham Young U., 1952, 1956; EdD, Arizona State U., 1961.

Heaton, Israel C. (1956) BS, MS, Utah State U., 1940, 1941; EdD, DRE, Indiana U., Bloomington, 1955.

Hungerford, Curtiss R. (1977) BA, Stanford U.; MA, PhD, U. of Southern California, 1956, 1967.

Hyatt, Norman F. (1970) BS, MS, Brigham Young U., 1948, 1949; EdD, U. of Oregon, 1964.

Oakes, Keith R. (1957) BS, MS, Utah State U., 1940, 1948; EdD, U. of Southern California, 1954.

Smith, Ralph B. (1963) BS, Brigham Young U., 1943; MA, U. of Southern California, 1947; EdD, Brigham Young U., 1962.

Programs and Degrees

MEd	Educational Leadership
EdD	Educational Leadership
PhD	Educational Leadership

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Educational Leadership (ELdr)

Undergraduate Course

452. *The Professional Teacher*. (1:1:0) F, W, Sp, Su Independent Study also. Prerequisite: ELED 400.

The teacher and the school: employment, professional relations, the law, finance, and professional affiliation.

Advanced Undergraduate or Graduate Courses

515R. *Special Topics in Education*. (1–3:3:1 ea.) F, W, Su Credit earned in 515R is not counted toward graduate degrees.

517. *Professional and Scholarly Writing in Education*. (2:2:Arr.) F, W, Su
Refinement of skills for professional writing efforts, e.g., memoranda, reports, articles, theses, etc. Practice and corrective feedback.

532. *Gifted and Talented: Programs*. (2:2:Arr.)

Examination of a variety of programs for gifted and talented students in the schools.

535. *Gifted and Talented: Curriculum and Instruction*. (2:2:2)

Designing curriculum and instruction for gifted and talented students in the schools.

537. *Gifted and Talented: Creativity*. (2:2:Arr.)

Nature of creativity and approaches to nurturing it.

539R. *Gifted and Talented: Practicum*. (1–4:Arr.:Arr. ea.)

Experience in a school setting under the direction of college faculty.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

600. *Stewardship: The Human and Organizational Domains*. (2:2:0)

602. *Stewardship: Educational Reform and the Schools*. (2:2:0)

609. *The School Principal*. (2:2:0)

611. *Improvement of School Practice*. (1:1:0)

614. *Education of Diverse Populations*. (2:2:0)

620. *Educational Finance*. (2:2:0)

622. *The Law and Education*. (2:2:0)

628. *Curriculum Development and Supervision of Instruction*. (2:2:0)

629. *Improvement of Curriculum and Supervision*. (1:1:0)

631. *Teaching and Learning: Research and Practice*. (2:2:0)

632R. *Field Practicum*. (2–6:Arr.:0 ea.)

634R. *Doctoral Internship*. (1–6:Arr.:0 ea.)

655. *Social and Cultural Foundations of Education*. (2:2:0)

658. *Political Aspects of Education*. (2:2:0)

659. *Contemporary Issues in Education*. (2:2:0)

660. *Stress Management*. (2:2:0)

663. *Research Methods 1*. (2:2:0)

664. *Research Methods 2*. (2:2:0)

665. *Evaluation and Assessment in Education*. (2:2:0)

668. *History and Philosophy of Education*. (2:2:0)

670R. *Workshop in Educational Leadership*. (1–3:3:0 ea.)

672. *Technology Applications in Education*. (2:2:0)

684. *Business Administration in Education*. (2:2:0)

687. *School Personnel Administration*. (2:2:0)

688. *Educational Facilities*. (2:2:0)

691R. *Doctoral Seminar*. (1–3:3:0 ea.)

694R. *Independent Study*. (1–3:Arr.:0 ea.)

695R. *Independent Research*. (1–3:Arr.:0 ea.)

696R. *Professional Education Project*. (1–3:Arr.:0 ea.)

700. *Educational Leadership*. (2:2:0)

702. *Educational Change*. (2:2:0)

720. *The Superintendency and Educational Policy*. (2:2:0)

731. *Principles of Curriculum Development*. (2:2:0)

740. *Adult and Continuing Education*. (2:2:0)

761. *The Community College*. (2:2:0)

762. *The College and University in America*. (2:2:0)

765. *Administration and Governance in Higher Education*. (2:2:0)

775. *Data Analysis*. (2:2:0)

776. *Evaluating Research*. (2:2:0)

780. *Social Policy and Economic Aspects of Education*. (2:2:0)

782. *Constitutional Law and Education*. (2:2:0)

788R. *Doctoral Practicum*. (2–6:Arr.:0 ea.)

790R. *Educational Leadership in American Schools*. (1–4:Arr.:0 ea.)

795. *Research and Reporting Techniques for Doctoral Dissertations*. (2:2:0)

799R. Dissertation. (1-18:Arr:0 ea.)

Educational Psychology

Ronald D. Bingham, Chair (328 MCKB)

Professors

- Bingham, Ronald D. (1971) BS, Utah State U., 1961; MEd, PhD, Pennsylvania State U., 1965, 1970.
- Crandell, John M. (1970) BA, MA, Arizona State U., 1951, 1957; PhD, U. of Texas, Austin, 1966.
- Gale, Darwin F. (1969) BS, MS, Utah State U., 1958, 1960; EdD, Brigham Young U., 1967.
- Hilton, Laurence M. (1985) BA, MA, U. of Utah, 1969, 1970; PhD, Northwestern U., 1973.
- Ingram, Cregg F. (1975) BS, MS, U. of Utah, 1968, 1970; EdD, U. of Kentucky, 1974.
- McPherson, David L. (1991) BS, Brigham Young U., 1967; MA, George Washington U., 1969; PhD, U. of Washington, 1972.
- Thomas, Glen E. (1968) BS, MEd, U. of Idaho, 1954, 1957; EdD, Colorado State Coll., 1968.
- Walton, Wilbur T. (1971) BA, Brigham Young U., 1957; MS, PhD, U. of Utah, 1965, 1969.

Associate Professors

- Brinton, Bonnie (1990) BA, U. of Utah, 1975; MA, San Jose State U., 1977; PhD, U. of Utah, 1981.
- Channell, Ron W. (1983) BS, MS, Brigham Young U., 1977, 1978; PhD, U. of Utah, 1983.
- Fujiki, Martin (1990) BS, U. of Idaho, 1972; MS, PhD, U. of Utah, 1974, 1980.
- Harris, Richard (1982) BS, North Dakota State U., 1973; MS, U. of Wisconsin, 1974; PhD, Purdue U., 1978.
- Rowe, Fred A. (1972) BS, MEd, Brigham Young U., 1961, 1963; EdD, Arizona State U., 1975.
- Wootton, Richard R. (1961) BS, MS, Brigham Young U., 1956, 1961; EdD, Utah State U., 1969.
- Young, James R. (1971) BA, MEd, Brigham Young U., 1965, 1966; PhD, George Peabody Coll., 1970.

Assistant Professors

- Allred, Keith W. (1991) BS, MS Brigham Young U., 1976, 1983; PhD, Vanderbilt U., 1988.
- Brown, Gail W. (1991) BA, Brigham Young U., 1966; MS, PhD, U. of Utah, 1983, 1988.
- Hanks, Wendy (1992) BS, MCD, Brigham Young U., 1979, 1981; PhD, Wichita State U., 1985.
- Richards, P. Scott (1990) BS, MS, Brigham Young U., 1981, 1983; PhD, U. of Minnesota, 1988.
- Todd, Sally M. (1977) BS, Brigham Young U., 1959; MS, PhD, U. of Arizona, 1970, 1973.

Instructor

- Lucido, Bonnie Rae (1979) BS, MS, Brigham Young U., 1964, 1966.

Clinical Instructor

- Bartholomew, Karen (1986) BS, U. of Utah, 1983; MCD, Brigham Young U., 1985.

Part-Time Professors

- Heaps, Richard A. (1970) BS, Brigham Young U., 1966; MA, PhD, U. of Utah, 1968, 1970.
- Kramer, Gary L. (1982) BS, MA, Brigham Young U., 1970, 1971; PhD, Oregon State U., 1977.
- Ward, G. Robert (1981) BS, MS, Utah State U., 1959, 1961; PhD, Michigan State U., 1965.

Part-Time Associate Professors

- Chamberlain, Jonathan (1970) BS, Brigham Young U., 1958; MEd, PhD, U. of Wyoming, 1964, 1967.
- Gleave, Robert (1989) BS, MEd, PhD, Brigham Young U., 1975, 1976, 1981.
- Isakson, Richard L. (1983) BA, Weber State U., 1970; MS, Bucknell U., 1971; PhD, Cornell U., 1975.
- Johnson, Richard W. (1968) BS, Utah State U., 1960; MS, U. of Wisconsin, Madison, 1964; PhD, Brigham Young U., 1968.
- Mouritsen, Maren M., Assistant Vice President and Dean of Student Life (1978) BS, Northwestern U., 1961; MS, PhD, Columbia U., 1968, 1978.
- Ruiz, Chris C. (1992) PhD, Claremont Graduate School, 1973.
- Winward, Edward J. (1959) BS, MS, Utah State U., 1959, 1960; PhD, U. of Missouri, Rolla, 1966.

Part-Time Assistant Professor

- Smith, Steven A. (1992) PhD, U. of Minnesota, 1988.

Emeriti

- Allred, Mildred T. Ravsten (1973) BA, MCD, Brigham Young U., 1952, 1971.
- Bauer, Edith B. (1945) BA, MA, Brigham Young U., 1930, 1946; PhD, U. of California, Berkeley, 1956.
- Downing, Lester N. (1954) BS, MS, Utah State U., 1947, 1949; EdD, Colorado State Coll., 1951.
- Hammond, Ruth K. (1966) BS, MS, U. of Utah, 1950, 1955; PhD, Purdue U., 1971.
- Harris, James M. (1955) BS, MS, Utah State U., 1952, 1953; PhD, Cornell U., 1955.
- Harrison, Betty D. (1961) BS, MS, PhD, Brigham Young U., 1959, 1960, 1965.
- Kelly, Burton C. (1962) BS, Idaho State U., 1952; MS, Brigham Young U., 1955; PhD, U. of Chicago, 1966.
- Low, Gordon M. (1964) BS, MS, U. of Utah, 1949, 1950; PhD, U. of Minnesota, Minneapolis, 1955.
- Morley, Alonzo J. (1928) BS, MA, Brigham Young U., 1925, 1931; PhD, U. of Iowa, 1935.
- Newman, Parley W. (1966) BS, MS, Utah State U., 1950, 1951; PhD, U. of Iowa, 1954.
- Rasmussen, Della Mae (1983) BA, U. of Utah, 1948; EdD, Brigham Young U., 1968.
- Rohde, Norma (1965) BS, U. of Utah, 1949; MA, Columbia U., 1958; EdD, Brigham Young U., 1965.

Wilson, Marguerite I. (1956) BB, U. of Utah, 1948; MA, San Francisco State Coll., 1955; EdD, George Peabody Coll., 1965.

Programs and Degrees

BS	Audiology
BS	Speech-Language Pathology
BS	Special Education
MS	Audiology
MS	Counseling and Guidance
MS	School Psychology
MS	Special Education
MS	Speech-Language Pathology
PhD	Counseling Psychology

The department offers undergraduate programs leading to bachelor's degrees in special education, audiology, and speech-language pathology. A bachelor's degree is a preprofessional program leading to a master's degree in either speech-language pathology or audiology.

The special education programs are designed to meet the requirements for Utah State teaching certification in the areas of mild/moderate handicapped and severe/profound handicapped. Other areas of emphasis within the area of special education include intellectually handicapped, learning disabled, and behaviorally disordered. Students can also be endorsed to teach gifted and talented children in Utah.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

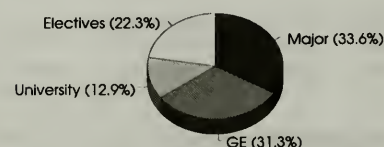
BS Audiology

BS Speech-Language Pathology

A bachelor's degree in audiology or speech-language pathology represents a preprofessional program leading toward a master's degree (which is required for certification in either speech-language pathology or audiology).

1. BS leading to admission to the master's degree in audiology: EPsy 133, 310, 320, 321, 330, 331, 334, 350, 351, 411, 430R, 434, 438, 444, 485R; Zool 260; Phscs 167; IS 286; Math 110, Stat 222, TecE 209.

Summary of Degree Requirements for BS Audiology



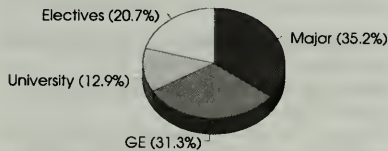
1. Total hours 128.0
2. Major hours* 43.0

3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	28.5
6. 40 hours upper-division GPA requirement of 3.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

II. BS leading to admission to the master's degree in speech-language pathology: EPsy 133, 230, 310, 320, 321, 330, 331, 334, 350, 351, 411, 438, 444, 450, 457, 458, 459; Phscs 167; Zool 260; IS 286; Math 110, Stat 222.

Summary of Degree Requirements for BS Speech-Language Pathology



1. Total hours	128.0
2. Major hours*	45.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	26.5
6. 40 hours upper-division GPA requirement of 2.85	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

III. Minor: Available with an emphasis in either audiology or speech-language pathology.

For further information contact the Education Advisement Center (120 MCKB).

BS Special Education

A bachelor's degree in *special education* must follow a five-level sequence. On completing the five-level sequence and GE requirements, an individual will receive a bachelor's degree in special education and also be eligible for certification in mild/moderate or severe/profound. The required five levels for special education certification are:

I. Level 1. Preliminary courses required: EPsy 102R, 204, 205.

II. Level 2. Introduction to theory and practices in special education: EPsy 305, 380R (taken simultaneously during fall semester or spring term junior year). EPsy 510 to be taken concurrently with 380R, 480R, or 481R.

III. Level 3. Advanced theory and practice in special education. EPsy 405, 480R followed by 519, 481R. Check with department for information on available semesters.

IV. Level 4. Required classes: EPsy 525; ELdr 452; IS 286, 376, Hlth 361.

V. Level 5. Final preparation and experience in area of specialization:

A. Mildly and moderately handicapped: EPsy 503, 506, 518, 586R.

B. Severely and profoundly handicapped: EPsy 481R, 519, 520, 521, 581R, 588R.

Level 5 final preparation can also include an experience in two areas of specialization beyond mild/moderate and severe/profound. These are:

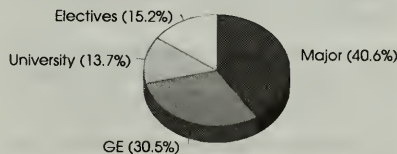
*A. Learning disabled: EPsy 525, 526, 584R.

*B. Emotionally handicapped: EPsy 510, 511, 582R.

*No Utah certification exists for these specialization areas.

For further information concerning the additional hours required for completing an additional major in elementary education and special education, contact the Education Advisement Center (120 MCKB).

Summary of Degree Requirements for BS Special Education



1. Total hours	128.0
2. Major (includes certification requirements)*	52.0
3. General Education requirements	39.0

Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	17.5
Religion	14.0
PE/Health	3.5
5. Elective hours	19.5
6. 40 hours upper-division GPA requirement of 2.85	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Distinction Between Certification Endorsements and Graduate Degrees

The Department of Educational Psychology distinguishes between programs leading to *teaching certification endorsements* and programs leading to *graduate degrees*. Students are advised to note the distinction as they plan for graduate study.

Educational Psychology (EPsy)

Undergraduate Courses

101R. Fieldwork in Special Education for Elementary Education Majors. (1-2:0:4 ea.) F, W, Sp, Su Required of all elementary education majors. Prerequisite: concurrent registration in EPsy 204.

102R. Fieldwork in Special Education. (1-2:0:4 ea.) F, W, Sp, Su Required of all special education majors. Prerequisite: concurrent registration in EPsy 204.

133. Introduction to Speech-Language Pathology and Audiology. (3:3:1) F, W, Alt. term

204. Education of Exceptional Children. (2:0:0) F, W, Sp, Su Independent Study also. Required of all elementary education and special education majors. Prerequisite: concurrent registration in either EPsy 101R or 102R.

205. Principles of Learning. (3:3:0) F, W, Su Principles of learning, the learning process, readiness, individual differences and motivation.

230. Language Science. (2:2:1) W Morphology, syntax, and semantic roles in language of children and adults; uses both manual and computer-assisted methods.

305. Special Education: Introduction to Theory and Practice. (4:4:0) F, Sp
Prerequisite: EPsy 102R, 204, 205, and concurrent registration in 380R.

310. Principles in Case Management. (3:3:2) W
Prerequisite: EPsy 133, 330, 331, and concurrent registration in 350, 351.

Principles of applied clinical science in managing speech and language disorders; apprenticeship required.

320. Speech Anatomy. (3:3:1) F Prerequisite: Zool 260.

Basic anatomy and physiology of speech mechanisms.

321. Speech Science. (3:3:0) W Prerequisite: EPsy 320, Phscs 167.

Laboratory investigation of scientific bases of normal and disordered speech perception and production; for audiologists and speech language pathologists.

330. Language Development. (3:3:1) F

Overview of how children learn language, including its relationship to cognitive, neural, and social development; language development in bilingual, minority, and handicapped persons.

331. Phonology. (2:2:1) F

334. Basic Hearing Science. (2:2:1) W
Prerequisite: Phscs 167.

Hearing anatomy, physiology, and science.

350. Language Disorders. (3:3:1) W
Prerequisite: EPsy 330, 331, and concurrent registration in 310, 351.

Causes and characteristics of language impairment; techniques for diagnosis, assessment, and treatment of language disorders.

351. Disorders of Articulation and Phonology. (3:3:0) W Prerequisite: EPsy 331 and concurrent registration in 310, 350.

380R. Field Experience in Special Education. (2:Arr.:Arr. ea.) F, Sp Prerequisite: EPsy 102R, 204, 205, and concurrent registration in 305; prior application. Fee.

405. Special Education Advanced Theory and Practice. (4:4:0) W, Su Prerequisite: EPsy 305, 380R, and concurrent registration in 480R.

411. Introductory Practicum in Speech-Language Pathology. (1:0:3) F, W, Sp, Su Prerequisite: EPsy 310, 350, 351, and instructor's consent.

First clinical experience for undergraduate clinicians; assessments and treatment of articulation and language disorders.

412R. Senior Practicum in Speech-Language Pathology. (1-3:0:5 ea.) F, W, Sp Prerequisite: EPsy 411, and instructor's consent.

Advanced undergraduate clinical practicum in speech-language pathology.

430R. Sign Language and Manual Communications Systems. (3:3:2 ea.) W
Orientation to manual communication systems and functional skill in the use of Ameslan, finger spelling, and other nonoral language forms.

434. Pediatric Audiology. (2:2:1) W
Basic principles utilized in assessing hearing sensitivity of children from birth to eight years.

438. Hearing Tests and Measures. (3:3:1) F
Prerequisite: EPsy 334.

444. Speech and Language for the Hearing Impaired. (3:3:3) F, W Limited to 15 each semester.

450. Speech-Language Pathology in the Schools. (2:2:0) W Prerequisite: EPsy 310, 350, 351, 411.

457. Voice Disorders. (2:2:0) W

458. Fluency Disorders. (3:3:0) F

459. Diagnosis in Speech-Language Pathology. (3:3:3) F
Appraisal and diagnosis of speech and language problems.

480R. Pre-Practicum Experience—Mild/Moderate Disabilities. (2:Arr.:Arr. ea.) W, Su Prerequisite: EPsy 102R, 204, 305, 380R, and concurrent registration in EPsy 405; advisor's consent; prior application. Fee.

481R. Pre-Practicum Experience—Severe/Profound Disabilities. (2:Arr.:Arr. ea.) F, W, Sp Prerequisite: EPsy 204, 405, and concurrent registration in EPsy 519; advisor's consent; prior application. Fee.

485R. Practicum in Speech-Language Pathology and Clinical Audiology. (1-5:Arr.:Arr. ea.) F, W, Sp, Su

490R. Seminar in Audiology and Speech-Language Pathology. (1-2:2:0 ea.) F

493R. Readings. (1-2:Arr.:Arr. ea.) F, W, Sp, Su

Advanced Undergraduate or Graduate Courses

500. Clinical Data Acquisition and Analysis. (3:3:0) F, Alt. term Prerequisite: Stat 222.

Research methods in audiology and speech-language pathology. Applying statistical techniques; professional literature and writing.

501. Test and Measurement Theory. (3:3:0) F, W, Su Independent Study also (no graduate degree credit given for Independent Study).
Basic test and measurement theories. Types of tests. Reliability and validity. Standardization and test construction.

502. Behavior Problems in the School. (3:2:0) W, Su
Etiology and correction of behavior problems in children.

503. Education of Individuals with Mild and Moderate Disabilities. (3:0:0) F, W, Su
Prerequisite: EPsy 405, 480R, and concurrent registration in 586R.

Developing, implementing, and evaluating instructional programs for children with mild to moderate learning difficulties.

505. Psychoeducational Implications of Exceptionality. (1-3:Arr.:Arr.) F

***506R. Curriculum and Technology in Special Education.** (3:3:Arr. ea.) F, W, Sp, Su
Prerequisite: EPsy 101R, 204 205, 305.

Curriculum and technology used in serving exceptional children in the classroom.

*Also, RelC 472, Teaching the Developmentally Disabled, is offered in the Religious Education section of this catalog.

510. Education of Individuals with Emotional and Behavioral Disabilities. (3:3:2) F, W, Su Prerequisite: EPsy 204, 305, instructor's consent, and prior application.

Educational implications of classification and characteristics of children with emotional and behavioral problems.

511. Curriculum for Individuals with Emotional and Behavioral Disabilities. (3:3:2) W Prerequisite: EPsy 510 and instructor's consent.

Instructional strategies for children with emotional and/or behavioral disabilities.

514R, 515R. Special Topics in Educational Psychology. (1-3:3:1 ea.) F, W, Sp, Su Independent Study also. Prerequisite: instructor's consent.

Note: No graduate credit is given for EPsy 514. EPsy 515R credit may count toward a graduate degree if prior approval is obtained.

- Effective Teaching
- Evaluating Student Learning
- Microcomputers in Schools
- Program Evaluation
- Current Topics in Educational Psychology
- Current Topics in Speech Pathology
- Current Topics in Audiology
- Current Topics in Special Education
- Understanding Exceptional Children
- Assessing Learning and Behavior
- Classroom Behavior Management
- Curriculum for Exceptional Children
- Teaching Exceptional Children
- Intellectually Handicapped
- Learning Disabled
- Emotionally Handicapped
- Exceptional Children in the Regular Classroom
- Current Topics in Counseling
- Changing Role of the Counselor
- Self-concept
- Motivation
- Gifted and Talented

518. Education of the Gifted and Talented. (2:2:2) F, W, Su Independent Study also.
Various approaches to educating the gifted and talented.

519. Education of Individuals with Severe and Profound Disabilities. (1-3:3:2) F, W, Su Independent Study also (no graduate degree credit given for Independent Study). Prerequisite: EPsy 102R, 204, 205, 305, and instructor's consent.

Educational implications in identifying and classifying individuals with severe and profound disabilities.

520. Curriculum for Individuals with Mental Retardation. (1-3:3:2) W, Su Independent Study also (no graduate degree credit given for Independent Study). Prerequisite: EPsy 519.

Instructional programs for the mentally retarded.

521. Curriculum for Individuals with Severe and Profound Disabilities. (1-3:3:1) W, Sp Prerequisite: EPsy 205, 305, 380R, 519.

Instructional programs for individuals with severe and profound disabilities.

525. Education of Students with Learning Disabilities. (3:3:3) F, W, Sp Prerequisite: instructor's consent.

526. Curriculum for Students with Learning Disabilities. (3:3:3) W, Sp Prerequisite: EPsy 525.

Organization of educational programs, curriculum development, and teaching methods for children with learning disabilities.

544. Advanced Hearing Science. (3:3:1) Alt. term

Hearing anatomy, physiology, and science.

546. Helping Relationships: Basic Concepts and Skills. (1-3:Arr.:Arr.) F, W

Basic interviewing and helping skills. For students interested in professional, paraprofessional, peer, or lay counseling.

573. Aphasia. (3:3:0) W

574. Communicative Disorders of Individuals with Severe Disabilities. (3:3:0) F

575. Motor Speech Disorders. (3:3:0) F

Neuropathology, symptomology, clinical assessment, and treatment of adult motor speech disorders.

576. Computers in Speech-Language Pathology and Audiology. (1:1:1) W

Characteristics of software and specialized hardware applied to computational study and interventions with language, speech, and hearing.

580R. Directed Observation in the Schools. (1-3:0:8 ea.) F, W, Sp, Su Prerequisite: instructor's consent.

581R. Practicum: Individuals with Mental Retardation. (1-8:0:8 ea.) F, W, Sp, Su Prerequisite: EPsy 520; departmental approval of application and placement one semester in advance of registration. Fee.

582R. Practicum: Individuals with Emotional and Behavioral Disabilities. (1-8:0:8 ea.) F, W, Su Prerequisite: instructor's consent, EPsy 511, and prior application. Fee.

584R. Practicum: Individuals with Learning Disabilities. (2-8:0:8 ea.) F, W, Sp Prerequisite: EPsy 526; departmental approval of application and placement one semester in advance of registration. Fee.

586R. Practicum: Individuals with Mild and Moderate Disabilities. (1-8:0:8 ea.) F, W, Su Prerequisite: EPsy 503; departmental approval of application and placement one semester in advance of registration. Fee.

588R. Practicum: Individuals with Severe and Profound Disabilities. (1-8:0:8 ea.) W, Sp Prerequisite: concurrent registration in EPsy 521; departmental approval of application one semester in advance of registration.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

600. Introduction to Counseling and Guidance Services. (3:3:0)

601. Advanced Educational Psychology. (3:3:1)

603. Guidance and Counseling of the Exceptional Child. (3:3:0)

604. Special Education Services in Public Schools. (2:2:0)

610. Problems and Issues in School Psychology. (3:2:1)

616. Acoustic Impedance Measures. (2:2:1)

617. Auditory Physiological Tests 1. (3:3:1)

618. Auditory Physiological Tests 2. (2:2:1)

625R. Psychological-Educational Assessment of Learning. (3:2:2 ea.)

626. Advanced Curriculum in Special Education. (3:2:2)

630. Theories of Child Language Acquisition. (3:3:0)

633. Dysphagia and Head Trauma Management. (2:2:0)

638. Advanced Hearing Tests and Measures. (3:3:2)

639. Community and Industrial Audiology. (2:2:1)

641. Hearing Aids. (3:3:1)

643. Adult Aural Rehabilitation. (2:2:2)

645. Testing in Counseling and Guidance. (3:3:0)

646. Counseling Theory and Interventions. (3:3:0)

647. Individual Testing in Education. (3:3:0)

648. Group Counseling and Interventions. (3:2:0)

649. Human Growth and Development. (3:3:4)

650. Leadership in Counseling and Guidance. (3:3:0)

651. Social and Multicultural Aspects of Counseling and Psychology. (3:3:0)

654. Educational and Career Guidance. (3:2:1)

655. Personal and Social Guidance. (3:0:0)

656. Religious Values and Methods in Counseling and Psychotherapy. (3:3:0)

662. Maxillofacial and Related Disorders of Human Communication. (2:2:0)

665. Career Assessment. (3:3:0)

671. Instrumentation-Calibration. (2:2:0)

672. Empirical Inquiry in Education. (3:3:Arr.)

673. Pathologies of the Auditory Mechanism. (3:3:0)

678. Counseling Skills Practicum. (3:1:4)

679. Counseling and Guidance Practicum. (3:1:4)

680R. Counseling and Guidance Internship. (2-6:0:18 ea.)

685R. Practicum. (1-8:2:8 ea.)

690R. Seminar. (1-4:2:0 ea.)

692R. Advanced Topics. (1-3:Arr.:Arr. ea.)

693R. Directed Individual Study. (1-3:Arr.:Arr. ea.)

694R. Special Projects. (1-3:3:0 ea.)

695R. Counseling Seminar. (1-3:Arr.:Arr. ea.)

697R. Special Projects. (2-6:Arr.:Arr. ea.)

699R. Master's Thesis. (1-6:Arr.:Arr. ea.)

701R. Doctoral Seminar. (1-2:1-2:0 ea.)

705. Preventive and Developmental Methods in Counseling Psychology. (3:3:0)

710. Ethics and Standards in Counseling Psychology. (3:3:0)

715. Diagnosis of Psychological Problems in Counseling. (3:3:0)

720. Fundamentals of Learning Theory and Cognitive Development. (3:3:0)

725. Theory and Practice of Objective Personality Tests: MMPI. (3:3:0)

745. Advanced Counseling Theory. (3:3:0)

746R. Supervision Theory and Practice in Counseling. (1-3:1:2 ea.)

748. Advanced Group Theory and Process. (3:3:0)

750. Research Theory and Methods in Counseling Psychology. (3:3:0)

779R. Advanced Practicum in Counseling. (1-4:3:0 ea.)

780R. Doctoral Clerkship in Counseling. (2-8:0:24 ea.)

790R. Advanced Seminar. (1-3:1:8 ea.)

799R. Doctoral Dissertation. (1-9:Arr.:Arr. ea.)

Elementary Education

D. Ray Reutzel, Chair (215 MCKB)

Professors

Allred, Ruel A. (1961) BS, MS, Brigham Young U., 1954, 1958; EdD, U. of Oregon, 1965.

Baird, James E. (1973) BS, MS, Brigham Young U., 1957, 1962; PhD, U. of Utah, 1973.

Eldredge, J. Lloyd (1981) BS, Brigham Young U., 1958; MS, EdD, U. of Utah, 1962, 1970.

Monroe, Eula Ewing (1992) BS, MA, Western Kentucky U., 1960, 1964; EdD, George Peabody Coll. of Vanderbilt U., 1980.

Reutzel, D. Ray (1985) BA, U. of Wyoming, 1977; MA, Utah State U., 1980; PhD, U. of Wyoming, 1982.

Sucher, Floyd (1991) BS, Brigham Young U., 1954; MA, California State U., Los Angeles, 1957; EdD, Northern Colorado State U., 1963.

Tolman, Marvin N. (1975) BS, Utah State U., 1964; MEd, U. of Utah, 1969; EdD, Utah State U., 1975.

Associate Professors

Campbell, Milo Kay (1966) BA, MEd, Brigham Young U., 1961, 1966; PhD, Wayne State U., 1972.

Chilcoat, George (Skip) (1989) BA, MEd, EdD, Arizona State U., 1972, 1975, 1983.

Cook, Paul F. (1977) BS, Utah State U., 1960; MS, PhD, Brigham Young U., 1966, 1968.

Cutler, Beverly R., Associate Dean (1969) BA, U. of Utah, 1952, MS, Brigham Young U., 1963; PhD, Stanford U., 1966.

Earle, Rodney S. (1993) BA, MEd, Brigham Young U., 1971, 1973; PhD, Indiana U., 1981.

Harris, R. Carl (1975) BS, MS, Utah State U., 1967, 1968; PhD, Pennsylvania State U., 1971.

Heil, Lillian H. (1974) BA, Fresno State Coll., 1950; MS, U. of Utah, 1960; EdD, Columbia U., 1968.

Jacobs, James S. (1976) BA, U. of Utah, 1968; MA, Stanford U., 1970; EdD, U. of Georgia, 1978.

Moore, Blaine H. (1970) BS, MEd, Brigham Young U., 1955, 1960; EdD, Colorado State Coll., 1969.

Nelson, Marvin N. (1959) BS, MS, Brigham Young U., 1951, 1961; PhD, U. of Utah, 1975.

Tunnell, Michael O. (1992) BA, EdD, Brigham Young U., 1973, 1986; MEd, Utah State U., 1978.

Assistant Professors

Clark, Welsford Hone (1956) BS, MEd, Brigham Young U., 1956, 1962.

Fawson, Parker C. (1993) BA, Weber State Coll., 1983; MEd, EdD Brigham Young U., 1986, 1989.

Hardy, Garry Ray (1970) BS, Utah State U., 1961; MS, Brigham Young U., 1970; EdD, U. of Houston, 1977.

Richards, A. LeGrand (1985) BS, PhD, Brigham Young U., 1975, 1982; MEd, Harvard U., 1976.

Instructor

Stahle, Debra (1991) BS, MA, Brigham Young U., 1981, 1988.

Field Instructors

Ostlund, Margaret F. (1987) BA, MEd, Ed.S., Brigham Young U., 1958, 1976, 1977.

Steed, Robin (1988) BS, Brigham Young U., 1951; MA, St. Mary's Coll., 1981; EdD, Brigham Young U., 1984.

Tuttle, Marie (1976) BS, MEd, Brigham Young U., 1969, 1976.

Emeriti

Anderson, Enid R. (1968) BS, MA, EdD, Utah State U., 1951, 1956, 1972.

Berryessa, Max J. (1963) BS, MS, Brigham Young U., 1948, 1949; EdD, Stanford U., 1959.

Black, Harvey B. (1970) BA, MA, Brigham Young U., 1950, 1954; PhD, Indiana U., Bloomington, 1962.

Bowles, Catherine (1960) BS, MEd, Brigham Young U., 1936, 1953.

Chai, Henry K. (1971) BS, Brigham Young U., 1951; MA, EdD, Arizona State U., 1962, 1979.

Clark, H. Clifford (1969) BS, EdD, Brigham Young U., 1954, 1963; MA, California State U., Los Angeles, 1957.

Clark, Hazel C. (1952) BS, U. of Utah, 1938; MS, Brigham Young U., 1957.

Daines, Delva (1955) BS, MS, Utah State U., 1940, 1947; EdD, Washington State U., 1956.

Davidson, Bertha B. (1950) BS, MEd, Brigham Young U., 1950, 1954.

Dunn, James W. (1970) BS, MS, EdD, Brigham Young U., 1950, 1960, 1968.

Harmon, Frank W. (1963) BS, MS, U. of Utah, 1952, 1956; EdD, Columbia U., 1964.

Knight, Leland Stan (1967) BA, MA, Chico State Coll., 1960, 1972; EdD, Brigham Young U., 1983.

Koplin, Joanne W. (1968) BS, U. of Utah, 1951; MEd, Brigham Young U., 1976.

Laird, Robert William (1973) BS, MS, Brigham Young U., 1951, 1962; EdD, Utah State U., 1971.

Miller, Elva K. (1955) BS, Brigham Young U., 1947.

Ord, John E. (1957) BS, Utah State U., 1940; MS, U. of Utah, 1949; EdD, Stanford U., 1958.

Rasband, Mima (1952) BS, MS, Brigham Young U., 1937, 1950.

Searle, June G. (1961) BS, MEd, Brigham Young U., 1958, 1967; PhD, U. of Utah 1974.

Storrs, Jane G. (1960) BS, MS, Brigham Young U., 1946, 1960.

Winterrose, Geneva (1967) BS, MS, Brigham Young U., 1948, 1951; EdD, Utah State U., 1968.

Young, Hazel F. (1955) BA, Brigham Young U., 1933.

Programs and Degrees

BS	Elementary Education
MEd	Teaching and Learning
MA	Teaching and Learning
EdD	Reading

The mission of the Department of Elementary Education is to prepare teachers who evidence a love of learning through the pursuance of a liberal education and who assist elementary school-aged children in becoming liberally educated by championing improved teaching and learning in the school, home, church, and community.

The program provides the opportunity for prospective teachers to (a) learn about the culture of the elementary school; (b) develop a solid foundation in basic principles of teaching and learning that originate in educational theory and research; and, (c) become proficient in systematically applying those basic principles.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

PhD Emphasis in Literacy Education

Students interested in a PhD degree with an emphasis in literacy education should consult the Instructional Science Department.

Program Requirements

BS Elementary Education

I. Supporting courses that meet General Education or university requirements: Engl 313; FamSc 210; Geog 120; Hlth 361; Math 305, 306; PE 169; Dance 275; PhysS 110A, 110B; RelC 491, 492; Zool 334.

II. Additional supporting courses: Art 326; Biol 101; EPsy 101R, 204; Music 378; PE 375; ELdr 452; IS 286, 376R.

III. Major courses: Eled 310R, 340, 350, 351, 352, 353, 354, 355, 360, 370, 400.

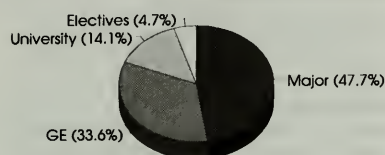
IV. No D credit will be accepted in the supporting or major courses. A minimum GPA of 2.85 is required for admission to the program.

Note 1: Students are accepted into Eled 310R by application only. Prerequisite: minimum 2.85 GPA, FamSc 210, Engl 115 or Phil 105, Precollege Mathematics, personal interview, and successful completion of the

Pre-Professional Skills Test. For test dates and further details, contact the Testing Center, 265 HGB, 378-6129, or the Education Advisement Center (EAC), 120 MCKB, 378-3426.

Note 2: Students are accepted into elementary education by application. Applications are obtained in the department office. See program guide for details.

Summary of Degree Requirements for BS Elementary Education



1. Total hours	128.0
2. Major (includes certification requirements)♦	61.0
3. General Education requirements	43.0
Core	18.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	18.0
Religion	14.0
PE/Health	4.0
5. Elective hours	6.0
6. 40 hours upper-division	
GPA requirement of 2.85	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Advisement

Upon deciding to major in elementary education, each student should contact an advisor in the EAC. Routine questions should also be directed to the EAC, but questions regarding course content and career decisions should be directed to the faculty. Consult the undergraduate secretary, 215 MCKB, for the faculty member best able to help.

Early Childhood Education

See Department of Family Sciences for programs and course listings. Advisement in the Education Advisement Center (120 MCKB) is required.

Elementary Music Education/Elementary Education Dual Certification

See the Department of Music Advisement Center (D-444 HFAC) for music programs and course listings and the Department of Elementary Education Advisement Center (120 MCKB) for the education program.

Elementary Education (EIEd)

Undergraduate Courses

+Instructional Science 286.
Microcomputers in the Schools. (1:2:Arr.)

310R. Introduction to Learning and Teaching. (1-6:Arr.:Arr. ea.) F, W, Sp By application only. See EAC or department office for application dates. Prerequisite: 2.85 GPA, Engl 115 or Phil 105, Precollege Mathematics, FamSc 210, PPST, personal interview, and minimum of 45 credit hours completed.

Course consists of two major components: (1) teaching for learning, and (2) cognitive understanding of effective teaching and learning. Demonstrated competence in both components is required for admittance to the professional program. Fee.

+Instructional Science 376R. **Instructional Technology.** (2:2:1 ea.)

340. Children's Literature. (3:3:0) F, W, Sp, Su Independent Study also.

Trends and titles in children's and adolescent literature. Reading and critiquing as well as practical uses of children's literature in both school and home.

350. Methods of Teaching Social Studies. (2:2:1) F, W, Sp, Su Prerequisite: EIEd 310R, 2.85 GPA, and formal admission into elementary education major.

Strategies of teaching social studies, using content as a vehicle for methodology and materials.

351. Intercultural Education. (1:1:0) F, W, Sp, Su

Cultural issues related to public education that promote constructive interaction among people of differing economic, social, racial, ethnic, and religious backgrounds.

352. Methods of Teaching Science. (2:2:1) F, W, Sp, Su Prerequisite: EIEd 310R, 2.85 GPA, and formal admission into elementary education major.

Strategies of teaching science, including meeting specific needs of the individual.

353. Methods of Teaching Mathematics. (3:3:1) F, W, Sp, Su Prerequisite: EIEd 310R, Math 305, 2.85 GPA, and formal admission into elementary education major. Recommended: IS 286.

Methods and strategies of teaching elementary school mathematics, emphasizing diagnostic evaluation and corrective techniques.

354. Issues in Elementary Language Arts Education. (2:2:0) F, W, Sp, Su Prerequisite: EIEd 310R or concurrent registration, 2.85 GPA, and formal admission into elementary education major.

Theory and evaluation of language arts, including language acquisition, oral language development, listening, writing, handwriting, spelling, grammar, and developmental reading.

355. Teaching Reading and Language Arts in the Elementary School. (4:4:0) F, W, Sp, Su Prerequisite: EIEd 310R or concurrent registration, 2.85 GPA, and formal admission into elementary education major.

Methods of teaching reading and language arts, including their nature and history.

360. Diagnostic and Prescriptive Teaching in Reading. (2:2:2) F, W Prerequisite: EIEd 310R, 354, 355, 2.85 GPA, and formal admission into elementary education major. Attendance first day is mandatory.

Using classroom diagnostic techniques to design a prescriptive program for correcting reading difficulties. Fee.

370. Practicum in Reading, Language Arts, and Mathematics. (4:1:4) F, W 1st block only. Prerequisite: EIEd 350, 352, 353, 354, 355, 360, Engl 313, and 2.85 GPA. Students must take EIEd 400 immediately following 370.

Practicum in reading, language arts, and mathematics in a school setting with emphasis on learning. Fee.

400. Classroom Student-Teaching Experience. (1-8:Arr.:Arr.) F, W 2d block only. Prerequisite: EIEd 370 and prior application. See EAC for application dates. Fee.

461. Individualized Instruction in the Elementary School. (1-2:1:0) On dem.

Techniques for individualizing instruction in the elementary school.

490R. Senior Seminar. (1-2:2:0 ea.) On dem. Prerequisite: instructor's consent.

493R. Independent Readings or Project. (1-4:0:3 ea.) F, W, Sp, Su Prerequisite: departmental approval.

Advanced Undergraduate or Graduate Courses

514R. Special Topics in Education. (1-3:Arr.:Arr. ea.) On dem. These courses do not count toward graduate degree.

- Reading
- Reading in the Content Areas
- Foundations of Reading
- Computers in Education
- Science
- Social Studies
- Mathematics
- Language Arts
- Children's Literature
- Curriculum
- Classroom Management
- Writing in Elementary Education

- Individualized Instruction
- Increasing Teaching Effectiveness
- Precision Teaching
- Language Development and Reading
- Environmental Education
- Organizing for Instruction

515R. Special Topics in Education. (1-3:Arr.:0 ea.) On dem. These courses do not count toward graduate degree without prior approval.

- Curriculum Innovations
- Effective Teaching
- Evaluating Student Learning
- Foundations
- Home-School Relations
- Microcomputers in Schools
- Program Evaluation
- Reading in the Content Areas
- Mathematics
- Science
- Classroom Management
- Language Arts
- Writing in the Elementary School
- Reading
- Psychology of Reading
- Precision Teaching
- Children's Literature

530. Principles of Learning. (3:3:0) Su
Improving classroom learning through understanding underlying psychological principles and theories.

533. Written Expression in the Elementary Schools. (2:2:0) On dem.

Foundation, objectives, and strategies for teaching the writing process to elementary students, including spelling, handwriting, and integration with listening and speaking skills.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

- 620. Organization and Administration of Reading Programs.** (2:2:0)
- 632. Science in Elementary Education.** (2:2:0)
- 633. Trends and Issues in Literacy Education.** (3:3:0)
- 635. Mathematics in Elementary Education.** (2:2:0)
- 636. Social Studies in Elementary Education.** (2:2:0)
- 640. Literature for Young People.** (2:2:0)
- 641. Trends and Issues in Reading.** (3:3:0)
- 642. Emergent Literacy.** (2:2:0)
- 645. Classroom Reading Diagnosis.** (3:3:0)
- 647. Comprehending Expository and Narrative Text.** (2:2:0)
- 648R. Practicum in Reading.** (1-4:Arr.:Arr. ea.)

650. Technology in Reading and Evaluation of Reading Materials. (1-3:3:0)

660. Historical Foundations in Reading. (2:2:0)

672R. Introduction to Research Design. (1-3:3:1 ea.)

676. Research in Reading. (2:2:Arr.)

680R. Professional Internship. (1-6:Arr.:Arr. ea.)

690. Master's Colloquium. (1:Arr.:Arr.)

693R. Directed Individual Study. (1-4:Arr.:Arr. ea.)

695R. Independent Research. (1-6:Arr.:Arr. ea.)

696R. Professional Education Project. (1-6:Arr.:Arr. ea.)

699R. Master's Thesis. (1-6:Arr.:Arr. ea.)

734. Literacy Seminar. (2:2:0)

740. Theoretical Models of Reading. (2:2:0)

741. Psychology and Physiology of Reading. (2:2:0)

742. Teaching Reading Vocabulary and Comprehension. (2:2:0)

743. Oral Language Acquisition: Parallels in Reading and Writing Development. (2:2:0)

780R. Professional Internship. (1-8:Arr.:Arr. ea.)

790R. Advanced Seminar. (1-3:Arr.:Arr. ea.)

793R. Directed Individual Study. (1-4:Arr.:Arr. ea.)

795R. Independent Research. (1-6:Arr.:Arr. ea.)

799R. Dissertation. (1-12:Arr.:Arr. ea.)

Instructional Science

Paul F. Merrill, Chair (201 MCKB)

Professors

- Bunderson, C. Victor (1991) BS, U. of Utah, 1961; PhD, Princeton U., 1965.
- Green, Edward E. (1972) BA, Brigham Young U., 1965; MS, EdD, Indiana U., Bloomington, 1970, 1972.
- Harrison, Grant V. (1969) BA, Brigham Young U., 1963; MA, Adams State Coll. of Colorado, 1965; EdD, U. of California, Los Angeles, 1969.
- Merrill, Paul F. (1977) BS, Brigham Young U., 1967; PhD, U. of Texas, Austin, 1970.
- Osguthorpe, Russell T., Associate Dean (1978) BS, MS, PhD, Brigham Young U., 1971, 1973, 1975.
- Spencer, Robert W. (1967) BS, MS, Utah State U., 1963, 1965; EdD, Brigham Young U., 1971.

Van Mondfrans, Adrian P. (1971) BS, MA, U. of Utah, 1963, 1964; PhD, U. of Wisconsin, Madison, 1967.

Associate Professors

- Inouye, Dillon K. (1978) BS, Brigham Young U., 1973; PhD, Stanford, U., 1978.
- Sudweeks, Richard R. (1980) BS, MA, Brigham Young U., 1965, 1973; PhD, U. of Illinois, 1978.
- Williams, David D. (1980) BS, Brigham Young U., 1976; MA, Western Michigan U., 1978; PhD, U. of Colorado, 1981.

Assistant Professor

Bunderson, Eileen D. (1991) BA, MS, U. of Utah, 1959, 1962; PhD, Brigham Young U., 1983.

Adjunct Faculty

Andrew S. Gibbons, Conrad A. Gottfredson, Ronald Edward Guymon, Trudy Kowallis, Richard Dwight Laws, James B. Olsen

Programs and Degrees

MS	Instructional Science
PhD	Instructional Psychology
PhD	Instructional Science

Instructional Science (IS)

Undergraduate Courses

The Department of Instructional Science does not offer a baccalaureate degree. However, undergraduate classes are offered as service courses to other departments in the College of Education. Some of these classes are cross-listed with other departments.

286. Microcomputers in the Schools. (1:2:Arr.) F, W, Sp, Su

Applying computer technology in public schools; evaluating educational software programs, using computer tools, computer programming in Logowriter.

376R. (IS-ScEd) Theory and Methods of Secondary Teaching. (1-2:Arr.:Arr. ea.) F, W, Sp, Su Independent Study also for secondary education.

See department for individual section descriptions.

470R. Undergraduate Research Training. (1-3:Arr.:Arr. ea.) F

Introduction of undergraduate students to the concepts of research and evaluation through practical experience.

Advanced Undergraduate or Graduate Courses

515R. Special Topics in Instructional Science. (1-3:3:1 ea.) F, W, Sp, Su On dem.

551. Introduction to Quantitative Reasoning. (3:3:0) F, Su On dem.

Introduction to statistical reasoning and methodology. Emphasizes the meaning and use of quantitative methods in answering substantive questions of educational research and practice. Use of computer software packages.

560. Microcomputer Materials Production. (3:3:Arr.) W, Su Prerequisite: IS 286 or 515R (Microcomputers in Schools).

Designing, programming, and debugging educational applications of microcomputers using a high-level computer language.

564. Instructional Design. (3:3:Arr.) F, Su

Identifying instructional problems; specifying objectives, instructional strategies, and media; analyzing learning outcomes; developing instructional materials and assessment instruments; validating instructional systems.

587. Audio/Visual Production. (3:3:Arr.) W, Su

Designing, producing, and using audio and visual instructional materials. Applying 35-mm photography and audio recording and mixing to education.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

620. Principles of Learning. (3:3:Arr.)**651. Quantitative Reasoning.** (3:3:Arr.)**652. Assessing Learning Outcomes.** (4:4:0)**653. Measurement Theory.** (3:3:Arr.)**654. Computers in Educational Measurement.** (2–4:2:2)**657R. Measurement Project.** (1–3:Arr.:Arr. ea.)**660. Authoring of Interactive Video.** (3:3:Arr.)**661. Evaluation in Education.** (3:3:Arr.)**662. Evaluation of Instructional Products.** (2:2:0)**663. Evaluation of Educational Programs and Curricula.** (3:3:Arr.)**664. Advanced Instructional Design.** (3:3:Arr.)**665. Introduction to Instructional Video Production.** (3:3:0)**667R. Evaluation Project.** (1–3:Arr.:Arr. ea.)**672. Empirical Inquiry in Education.** (3:3:Arr.)**673. Research Synthesis and Conceptualization.** (3:3:Arr.)**674R. Inquiry Methods.** (1–3:Arr.:Arr. ea.)**677R. Research Project.** (1–3:Arr.:Arr. ea.)**680R. Internship.** (1–6:0:18 ea.)**682. Project and Instructional Resource Management.** (3:3:Arr.)**687R. Development Project.** (1–3:Arr.:Arr. ea.)**690R. Seminar.** (1–3:Arr.:Arr. ea.)**692R. Advanced Topics.** (1–3:Arr.:Arr. ea.)**693R. Directed Individual Study.** (1–3:Arr.:Arr. ea.)**698R. Master's Project.** (1–6:Arr.:Arr. ea.)**699R. Master's Thesis.** (1–6:Arr.:Arr. ea.)**760R. Advanced Computer-based Instruction.** (3:3:Arr.)**790R. Advanced Seminar in Instructional Science.** (1–3:1:8 ea.)**799R. Doctoral Dissertation.** (1–9:Arr.:Arr. ea.)**Secondary Education**

C. Garn Coombs, Chair (110 MCKB)

Professors

Baird, Joseph Hugh (1963) BS, MS, U. of Utah, 1954, 1954; EdD, U. of California, Berkeley, 1962.

Clark, D. Cecil (1974) BS, MS, Brigham Young U., 1960, 1961; PhD, Stanford U., 1965.

Cranney, A. Garr (1979) BA, Harvard U., 1955; MA, Brigham Young U., 1961; PhD, U. of Minnesota, Minneapolis, 1968.

DeLong, Thomas J. (1979) BA, MA, Brigham Young U., 1974, 1976; PhD, Purdue U., 1979.

Edwards, Clifford H. (1978) BS, MEd, Utah State U., 1962, 1964; EdD, U. of Utah, 1968.

Kay, Richard S. (1972) BS, MS, U. of Utah, 1965, 1969; PhD, Purdue U., 1972.

Wolfgramm, Harold F. (1966) BS, MS, PhD, U. of Utah, 1959, 1960, 1964.

Associate Professors

Coombs, C. Garn (1971) BS, U. of Utah, 1962; MA, DA, Carnegie-Mellon U., 1968, 1975.

Flinders, Neil J. (1978) BS, MRE, EdD, Brigham Young U., 1960, 1963, 1968.

Hansen, J. Merrell (1988) BA, MEd, Brigham Young U., 1964, 1967; PhD, U. of Texas, Austin, 1971.

Rogers, J. Keith (1971) BS, MEd, Brigham Young U., 1959, 1963; PhD, Michigan State U., 1971.

Assistant Professors

Arnoldsen, Larry M. (1969) BS, Brigham Young U., 1960; MA, California State Polytechnic U., 1965; EdD, Brigham Young U., 1985.

Clemmer, Janice White (1980) BS, Brigham Young U., 1964; MA, Dominican Coll. of San Rafael, 1975; MA, U. of San Francisco, 1976; PhD, U. of Utah, 1979, 1980.

Pinnegar, Stefinee (1992) BS, MA, Brigham Young U., 1978, 1989; PhD, U. of Arizona, 1992.

Emeriti

Alley, Stephen L. (1956) BS, MS, U. of Utah, 1947, 1951; EdD, Harvard U., 1958.

Allred, Wallace E. (1956) BS, MEd, Brigham Young U., 1956, 1957; MS, Oregon State U., 1965; PhD, U. of Utah, 1971.

Belt, W. Dwayne (1961) BA, Brigham Young U., 1952; MA, EdD, Colorado State Coll., 1958, 1961.

Callahan, Sterling G. (1953) BS, Brigham Young U., 1937; MA, George Washington U., 1947; EdD, U. of Virginia, 1953.

Card, Willard R. (1967) BS, U. of Utah, 1957; MA, San Jose State Coll., 1964.

Compton, Lane A. (1953) BS, MS, EdD, U. of Utah, 1944, 1951, 1955.

deJong, Thelma (1957) BA, Southern Idaho Coll. of Education, 1948; MA, Brigham Young U., 1957.

Henderson, E. Dean (1964) BS, MEd, Utah State U., 1936, 1958.

McConkie, Don L. (1953) BS, MS, Brigham Young U., 1927, 1942.

Wilcox, Ray T. (1957) BS, MEd, Brigham Young U., 1951, 1954; EdD, U. of California, Berkeley, 1957.

Programs and Degrees**Composite teaching majors only:**

BS Physical Science
BS Social Science

The bachelor's programs in this department exist primarily to prepare students for certification as teachers in secondary schools.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements**Core Requirements for All Degree Programs in Secondary Education**

I. Approved teaching major and teaching minor, or composite teaching major, and professional education courses.

II. Professional education courses (28–33 hours): ScEd 276R (4—preferably during sophomore year), 351 (2), 376R (5 minimum as required by teaching major), ScEd 377 (3) (biological, physical, and social sciences only), 476R (15—includes student teaching and teaching reading); IS 286 (1); ScEd 326 (2) or Soc 326 (3).

III. Supporting courses: Hlth 362 (fulfills GE), RelC 491–492 (fulfills religion requirement).

IV. Cumulative GPA of 2.85 for entrance into ScEd 276R (must be maintained).

Education

V. No grade below C- will be accepted in art, dance, English, English as a second language, foreign languages, health, technology education, history, family sciences, political science, or psychology.

VI. A delay of ten years or more before completing graduation/certification requirements will necessitate taking additional courses to update education and subject knowledge.

Student Teaching Prerequisites

I. Successful completion of at least 24* hours in the teaching major and 12* hours in the teaching minor (must meet department requirements), or 36 hours in the composite teaching major.

II. Successful completion of ScEd 276R, 351, appropriate 377, and at least 3 credit hours of ScEd 376R modules.

III. 2.85 GPA and acceptable ACT/SAT scores or PPST.

IV. Application for student teaching certification in the Education Advisement Center (EAC).

V. Students requesting to student teach only in their minor must complete *all* minor course work before student teaching and must obtain written permission from the Secondary Education Department.

*Some academic departments require completion of more than the listed minimum before clearance for student teaching.

Certification Procedures

Applicants should not assume that certification is automatic once preceding items I-VI have been completed. Students have the responsibility to keep the EAC informed regarding progress toward certification. Any deviation from the certification program outlined in this catalog must be approved by both the academic major department chair and the chair of the Department of Secondary Education. It is the students' responsibility to arrange for the preparation and circulation of the necessary memoranda initiating such action.

To avoid any undue delays concerning certification, students are urged to arrange for a personal review of the EAC file well in advance of registration for the final semester. Completion of graduation requirements does not necessarily mean that certification requirements have been met. Students who have received a degree in an academic area and wish to obtain a secondary teaching certificate should contact the Education Advisement Center (120 MCKB) for specific information.

Teaching Majors, Minors, and Composites

The following teaching majors and minors reflect courses taught in Utah secondary schools. The list is determined cooperatively

by the different academic departments and the Department of Secondary Education.

Secondary School Subjects Acceptable as Teaching Majors and Minors

Anthropology+	History
Chemistry	Japanese*
Computer Science	Journalism
Chinese*	Latin*
Dance	Mathematics
Economics	Physical Education
English	Physics
English as a	Political Science+
Second Language	Psychology+
French	Russian
Geography	Sociology+
German	Spanish
Health	Theatre and Film

Subjects Acceptable as Teaching Minors Only

Biology
Driver and Safety Education+
Multicultural Education* (one of three area studies)
Asian Studies
Latin American Studies
Near Eastern Studies
Native American Studies*
Recreation Management*
Special Education—Mild and Moderate

Note 1: Subjects marked with an asterisk (*) are not commonly taught in Utah public schools. If a subject so marked is presented as a teaching major or a teaching minor, a subject not marked with an asterisk *must* be used to support it.

Note 2: Two subjects marked with the symbol + are not to be used in a major-minor combination (job opportunities are extremely limited with such related areas).

Areas Acceptable as Composite Teaching Majors

Art
Biology
Earth and Space Science
English
Home Economics
Humanities
Technology Education
Music
Physical Science
Social Science

Courses Required for Teaching Majors, Teaching Minors, and Composite Teaching Majors

Anthropology

Teaching Major

I. Anthr 101, 108, 110, 300, 309.

II. 6 hours from Anthr 317, 325, 326, 327, 330, 340, 343, 345.

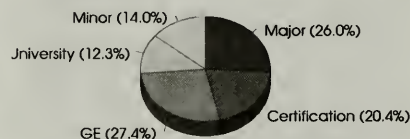
III. 9 hours from Anthr 215, 251, 252, 355, 365, 370, 376, 378, 380.

IV. 6 hours from Anthr 430, 431, 432, 433, 436, 438, 439.

V. 6 hours from upper-division anthropology classes, excluding Anthr 399R, 454R, 470.

Note: If available, Anthr 348 is highly recommended as an elective.

Summary of Degree Requirements for Anthropology Teaching



1. Total hours	142.5
2. Major hours*	37.0
3. Teacher certification requirements*	29.0
4. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
5. University requirements	17.5
Religion	14.0
PE/Health	3.5
6. Required minor	20.0
7. 40 hours upper-division GPA requirement of 2.85	
8. Estimated semesters to graduate	
13 hours per semester	11.0
16 hours per semester	9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (16-hour list)

I. Anthr 101, 108, 110, 300, 309.

II. 3 hours from II, III, or IV under Teaching Major above, or Anthr 348.

Art

Composite Teaching Major

See the Art section of this catalog for degree requirements.

Art Education Minor

See the Art section of this catalog for degree requirements.

Asian Studies

See Multicultural Education.

Biology

Composite Teaching Major

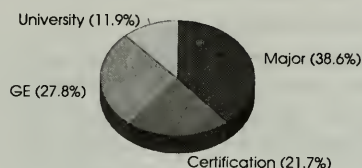
I. Biol 130; Botny 105, 205; Zool 204, 261, 493; Botny-Zool 250, 276, 475; Geol 101;

Math 110; Phscs 105, 106; either Chem 101, 152, 181; or 105, 106, 107, 351.

II. One of the following emphases:

- A. **Botany Emphasis:** Botny 210, 440, 491R, Zool 344, Mcbio 221, 222.

Summary of Degree Requirements for Botany Emphasis

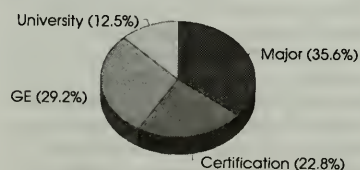


1. Total hours 147.5
2. Major hours 57.0
3. Teacher certification requirements 32.0
4. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

- B. **Microbiology Emphasis:** Mcbio 265, 351, 402.

Summary of Degree Requirements for Microbiology Emphasis



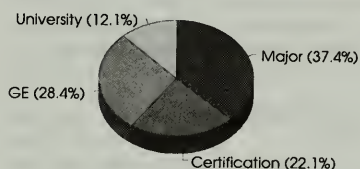
1. Total hours 140.5
2. Major hours 50.0
3. Teacher certification requirements 32.0
4. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5

- Religion 14.0
- PE/Health 3.5
- 6. Elective hours 0.0
- 7. 40 hours upper-division GPA requirement of 2.85
- 8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
- 9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

- C. **Zoology Emphasis:** Zool 260, 331, 344, Mcbio 221, 222.

Summary of Degree Requirements for Zoology Emphasis



1. Total hours 144.5
2. Major hours 54.0
3. Teacher certification requirements 32.0
4. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

- III. Recommended: Courses from AgHrt 282, 283; Botny 120, 210, 321, 330, 385, 480; FSN 235, 236; Mcbio 311, 342; Range 462, 465, 527, 565; Zool 312, 317, 330, 334, 338, 342, 350, 363, 380, 417, 443, 445, 446, 447, 460, 461; Geol 103, 111, 112; Math 111, 119.

Teaching Minor (29- to 30-hour list)

Botny 105; Botny 205 or 210; Botny-Zool 250; Botny-Mcbio-Zool 475; Mcbio 221, 222; Zool 204; Zool 260 or 261; Zool 276, 331.

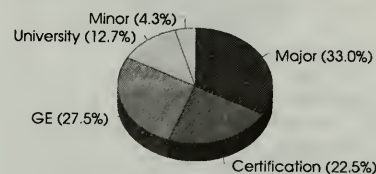
Chemistry

Note: See the Chemistry Department section of this catalog for prerequisite courses and limitations.

Teaching Major

Chem 111H, 112, 226, 227, 351, 352, 354, 391, 461, 462, 464, 501; Math 112, 113, 343; Phscs 121, 122, 214, 221; CS 131 or ChEn 101; 3 additional credits from Chem 481, 499R, or any of the Chem 500-series courses.

Summary of Degree Requirements for Chemistry Teaching



1. Total hours 138.0
2. Major hours 45.5
3. Teacher certification requirements 31.0
4. General Education requirements 38.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 4.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 6.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (19- to 20-hour list)

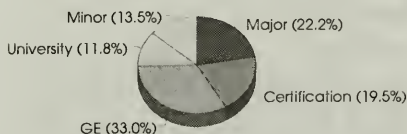
Chem 111H, 112, 226 (or 105 or 111 and 106, 107, 223), plus either of the following sequences: Chem 351, 352, 354 or 353 (2 hours); or 461, 462, 464.

Chinese

Teaching Major

Chin 202, 301, 321, 322, 325, 326, 344, 343 or 345, 377, 441, 443 or 444.

Summary of Degree Requirements for Chinese Teaching



1. Total hours 148.5
2. Major hours ♦ 33.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 49.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 16.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.5
 - 16 hours per semester 9.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (25-hour list)

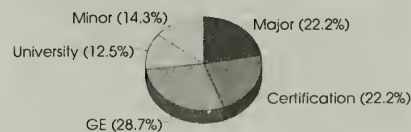
Chin 301, 321 or 322, 326, 377, 441, 443 or 444; Hist 343 or 348R (Chinese Culture).

Computer Science

Teaching Major

CS 142, 143, 152, 153, 232, 252, 302, 327, 330, 353, 404; Math 119; Phscs 121.

Summary of Degree Requirements for Computer Science Teaching



1. Total hours 139.5
2. Major hours ♦ 31.0
3. Teacher certification requirements ♦ 31.0
4. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0

5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (19-hour list)

CS 142, 143, 152, 232, 302, 330, 353.

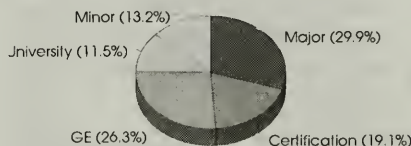
Dance Education

All dance majors should also fulfill the noncourse requirements specified under respective majors in the Department of Dance section of this catalog.

Dance Education: Secondary Teacher Certification

- I. Dance 240R, 242, 261, 290, 291R, 332, 336, 340R, 355, 362, 363, 364, 366, 367, 369, 376, 386, 460, 461, 464, 466, 469, 562R, PE 363, 460.
- II. Recommended electives: Dance 131, 231, 331, 365, 440R.

Summary of Degree Requirements for Dance Education



1. Total hours 152.0
2. Major hours ♦ 45.5
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.5
 - 16 hours per semester 9.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Dance Education Minor (21-hour list)

Dance 240R, 242, 260, 261, 290, 355, 362, 363, 364, 366, 376, 386, 466.

Earth and Space Science

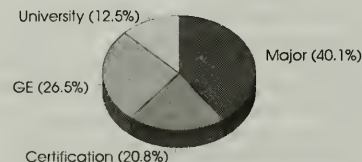
Composite Teaching Major

I. Geol 109, 111, 112, 210, 355, 404, 411, 480, and 6 elective hours; Phscs 127, 128, 137.

II. Phscs 105, 106, 107, 108; Chem 105, 106, 107; Math 119; CS 142; Phil 423; Engl 315 or 316.

Note: Of major requirements listed, 24 hours also satisfy GE requirements. With other GE and secondary education requirements, major requires 129.5 hours to graduate.

Summary of Degree Requirements for Earth and Space Science



1. Total hours 139.5
2. Major hours ♦ 56.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 37.0
 - Core 12.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

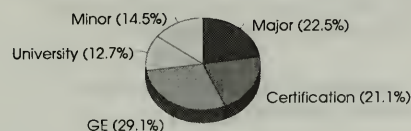
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Economics

Teaching Major

Stat 321, Econ 110, 380, 381, 386, 388, plus 15 additional hours in economics. At least 12 hours must be selected from Econ 413R through 588.

Summary of Degree Requirements for Economics Teaching



1. Total hours 137.5
2. Major hours ♦ 31.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division
GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (18-hour list)

Econ 110, 280 or 380, 381, and 9 additional hours in economics.

English

Note: English majors and composite majors are exempt from the GE Advanced Writing requirement. Engl 252 (formerly Engl 314) is required as part of the major requirements. English majors and composite majors must complete the General Education Foreign Language option.

The major and composite major have as their basis a core of required courses in writing, literature, and language arranged so that earlier courses lay foundations on which subsequent courses build. Therefore, level 1 is prerequisite to level 2, level 2 to level 3, etc. The courses within each level may be taken concurrently.

Core Requirements for Teaching Major

1. Literature and Writing Core (27 hours)
 - Level 1: Engl 251.
 - Level 2: Engl 252, 291.
 - Level 3: Engl 292, 293.
 - Level 4: Engl 382 plus one course from each of the following groups:
 - a. Engl 371, 372, 373, 385
 - b. Engl 374, 375, 376

c. Engl 361, 362, 363

II. Language Core (9 hours)

Courses in the literature and writing core are not prerequisite to courses in the language core.

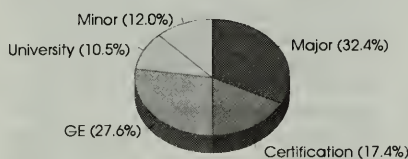
- Level 1: Engl 223
- Level 2: Engl 324
- Level 3: Engl 325

III. Other required courses (15 hours): Engl 377, 378, 420, 423, 495. English majors must complete Engl 377 and 378 before student teaching. ScEd 276R is prerequisite to Engl 377 and 378.

IV. Electives: A minimum of 3–6 hours at or above the 300 level. These courses may be taken concurrently with literature level 4 and language level 3. Electives should be selected in consultation with a faculty advisor. Engl 355 and 391 or 392 are strongly recommended.

Note: At least 24 of the 48 hours in the teaching major must be taken in residence at the BYU Provo campus.

Summary of Degree Requirements for English Teaching



1. Total hours 166.5
2. Major hours ♦ 54.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 46.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 16.0
 - Advanced Writing 0.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division
GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 13.0
 - 16 hours per semester 10.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

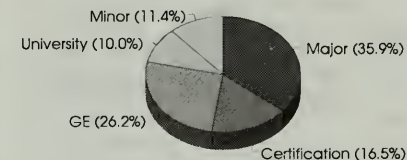
Core Requirements for Composite Teaching Major

English composite teaching majors must complete the teaching major list (see above)

plus additional course work as follows: Engl 218R, 316 or 415R, and one course from ThF 121, 361, Comms 150.

Note: At least 28 of the 56 hours in the composite teaching major must be taken in residence at the BYU Provo campus.

Summary of Degree Requirements for English Composite Teaching



1. Total hours 166.5
2. Major hours ♦ 63.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 46.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 16.0
 - Advanced Writing 0.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division
GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 13.0
 - 16 hours per semester 10.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (24-hour list)

Engl 251 (prerequisite to all other English courses), 291 (prerequisite to all subsequent English courses listed), 292, 293, 322, 377, 382, 423.

Note 1: The core does not apply to the minor.

Note 2: At least 12 of the 24 hours must be taken in residence at the BYU Provo campus.

English as a Second Language

Teaching Major*

Ling 230 or Engl 223, Ling 531, 540, 572, 577, and 18 hours from Ling 431, 500, 525, 550, 555, 573, 660, 671, 677, 678, 679, 695, Engl 529.

*Only for students enrolled in graduate TESL program.

Teaching Minor (19-hour list)

Ling 230, 330, 531, 540, 572, 577.

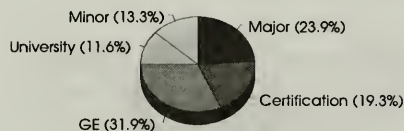
Education

French

Teaching Major

Fren 301, 321, 322, 326, 377, 429, 445, 446, 491, plus four courses from 439, 441, 442, 443, 495.

Summary of Degree Requirements for French Teaching



1. Total hours 150.5
2. Major hours 36.0
3. Teacher certification requirements 29.0
4. General Education requirements 48.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 0-15.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.5
 - 16 hours per semester 9.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (18-hour list)

Fren 301, 321, 326, 377, 445, 446, 491.

Note 1: Teaching majors and minors will be required to have an Oral Proficiency Interview (OPI) during their junior year (after completing the 300-level courses) and their senior year (the last semester before graduating). The rating of the senior OPI will be recorded on the student's transcript. Minimal desired OPI rating is *Advanced*.

Where necessary to strengthen oral proficiency, students are offered various opportunities: conversation courses (211R, 311R, 411), the Student Foreign Language Residence, Study Abroad programs, and support materials in the Humanities LRC such as tapes, videos, and daily satellite broadcasts from French-speaking Canada.

Note 2: All teaching majors and minors in French must take Fren 377 before student teaching. (The course may be waived for students who have taken it in another foreign language.) Teaching majors must

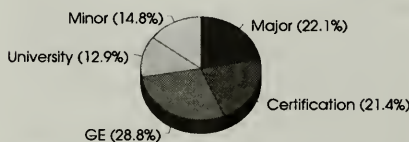
complete secondary education certification requirements, including student teaching, to graduate.

Geography

Teaching Major

Geog 101, 120, 211, 212, 221, 222, 301, 331, 450, 499, 515; Soc 205 or equivalent; and 10 or more additional hours to be selected after consultation with a geography advisor.

Summary of Degree Requirements for Geography Teaching



1. Total hours 135.5
2. Major hours 30.0
3. Teacher certification requirements 29.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (18-hour list)

Geog 101, 120, 211, 221, 222, 301, 450; Soc 205 or equivalent.

Geology

Teaching Minor (19-hour list)

Geol 111, 112, and 8 hours from 109, 210, 286, 311, 351, 352, 355, 370, 404, 411, 435, 436, 440, 445, 480.

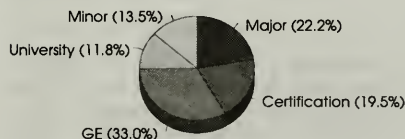
German

Seek advisement in the Department of Germanic and Slavic Languages, the Humanities Advisement Center, and the Education Advisement Center.

Teaching Major

Germ 310, 320, 330, 340, 350, 360 or 450, 377, 430, 431, 491; two courses from the group 440R, 441R, 442R; 495R or 496R.

Summary of Degree Requirements for German Teaching



1. Total hours 148.5
2. Major hours 33.0
3. Teacher certification requirements 29.0
4. General Education requirements 49.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 0-16.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.5
 - 16 hours per semester 9.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (20-hour list)

Germ 310, 320, 330, either 430 or 431, 377, 491, and an additional 6 or more hours from the options: 340 (recommended after 430 or 431), 350, 360, 430, 431, 440R, 441R, 442R, 450, 495R, 496R.

Note 1: Students must take Germ 377 before student teaching; however, Germ 377 may be waived for students who have had this course in another foreign language.

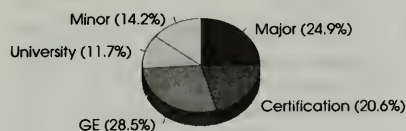
Note 2: All teaching majors and minors should register with the secretary in the Department of Germanic and Slavic Languages.

Health Sciences

Teaching Major

Hlth 300, 320, 325, 365, 370, 381, 421, 436, 449R (A,B), 451, 460, 461, 463, 465, and 5 hours from 403R, 425, 431R, 463, 480.

Summary of Degree Requirements for School Health



1. Total hours 140.0
2. Major hours* 35.0
3. Teacher certification requirements* 29.0
4. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (21-hour list)

Hlth 300, 320, 365, 381, 421, 460, 463, and 5 hours from 325, 370, 431, 451, 465, 525, 536, 561, 563, 580.

Driver and Safety Education Teaching Minor (16-hour list)

Hlth 121 or 320, 325, 444, 445, 446, and 4 hours from 460, 502R, 525; Psych 321, ScEd 460.

Note 1: Students should establish their program through consultation with an advisor from the Department of Health Sciences.

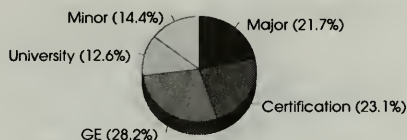
Note 2: Students majoring in health sciences may not double-count hours in the driver education minor.

History

Teaching Major

Hist 120, 121, 200, 201, 202, 366, 477, 485, 490, plus sufficient hours from courses listed in the History section of this catalog to bring total to 39 hours. At least one class must be chosen from each of three of the following areas: Asia or the Near East, Europe, Latin America, or the United States.

Summary of Degree Requirements for History Teaching



1. Total hours 138.5
2. Major hours* 30.0
3. Teacher certification requirements* 29.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (21-hour list)

Hist 120, 121, 200, 201, 202, 366, plus 3 hours of upper-division courses listed in the History section of this catalog to bring total to 21 hours.

In addition to the 21 hours required of history teaching minors, students are also required to complete Hist 477, Teaching Methods, in lieu of ScEd 377.

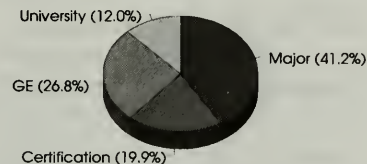
Note: NES 336R and Europ 336R are also acceptable toward history requirements.

Home Economics Education

Composite Teaching Major

FamSc 150, 160, 210, 230, 250, 288, 300, 303, 304, 322, 335, 336, 371, 377; Nurs 288; FSN 100, 200, 344, 345; either FamSc 340 or FSN 374; CITx 115, 145, 255, 260, one of 110, 235, 300, 355, 365.

Summary of Degree Requirements for Home Economics Education



1. Total hours 146.5
2. Major hours* 55.0
3. Teacher certification requirements* 35.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Family Life Emphasis

I. FamSc 150, 160, 210, 250, 288, 300, 303, 322, 377; Nurs 288; 9 hours from FamSc 301, 302, 460, 461, 465, Psych 306.

II. Complete the courses listed in one of the following areas:

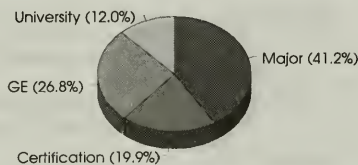
- A. Clothing and Textiles: CITx 110, 260, 300, and 3 hours from 115, 145, 235, 255, 330, 355, 365.
- B. Family Sciences: 9 hours from FamSc 230, 304, 335, 371, 372, 404.
- C. Food Science and Nutrition: FSN 100, 200, 344, 345.

III. Take 14 additional hours from the areas not chosen in section II above:

- CITx 110, 235, 260, 300.
FamSc 230, 304, 310, 340, 360, 371, 372, 404.
FSN 100, 200, 310, 344, 345, 374, 410.

Education

Summary of Degree Requirements for Family Life Emphasis



1. Total hours 143.5–147.5
2. Major hours ♦ 58.0–62.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division
GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Humanities

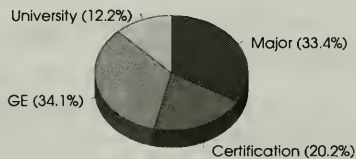
Composite Teaching Major

Humanities majors must select one of the following: English teaching minor, history teaching minor, or foreign language teaching minor in either French, German, Japanese, Latin, Russian, or Spanish.

In addition to the dominant field, all humanities majors must complete the following:

- I. Historical foundation (21 hours): Hum 200, 201, 202, 261, 262 (Honors sections recommended); 240 or 242; C1Cv 110 (Honors section recommended).
- II. Skills courses (9 hours): Traditional humanistic skills (9 hours; 3 in each category):
 - A. Hum 350 (prerequisite: Engl 311 or Phil 311).
 - B. One upper-division foreign language literature course beyond GE requirement.
 - C. One of Phil 110, 213, 214.
- III. Problems and issues courses (6 hours): Two of Hum 401R, 402R, 403, 404R, 405R.

Summary of Degree Requirements for Humanities Composite Teaching



1. Total hours 137.5–149.5
2. Major hours ♦ 42.0–54.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 49.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 16.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division
GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

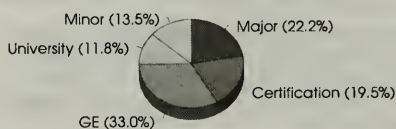
Note: Students who choose the English minor must also complete Engl 378.

Japanese

Teaching Major

- I. Japan 202, 301, 311R, 321, 322, 325 or 326, 377, 441, 443, 444, Ling 230.
- II. Electives (9 hours): Japan 325, 326, 343, 344, 345, 353; Hist 345 or 346.

Summary of Degree Requirements for Japanese Teaching



1. Total hours 148.5
2. Major hours ♦ 33.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 49.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 0–16.0

- Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division
GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.5
 - 16 hours per semester 9.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (22-hour list)

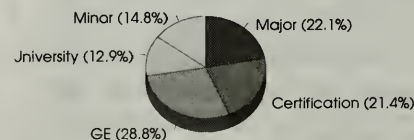
Japan 301, 311R, 321, 322, 325 or 326, 377, plus one elective from Japan 343, 344, 345, 353.

Journalism Education (Communications)

Teaching Major

- I. Core: Comms 101, 201, 461R.
- II. Comms 307, 311, 312, 323, 420, plus, with faculty advisor approval, 9 hours from 230, 272, 316, 330, 346, 365R, 427, 447, 480, 521, 528.

Summary of Degree Requirements for Journalism Education (Communications)



1. Total hours 135.5
2. Major hours ♦ 30.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division
GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (23-hour list)

Teaching major core courses plus Comms 311, 312, 323, and 4 hours from 230, 255, 307, 420.

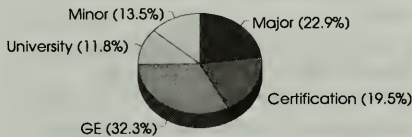
Latin

Teaching Major

I. Latin 201, 301, 302, 321, 377; ClCv 110 or 241; 307, 362; Clscs 350, 420; 12 hours from Latin 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 490R, Clscs 430R, 490R.

II. Allied course work: Approved teaching minor or second teaching major.

Summary of Degree Requirements for Latin Teaching



1. Total hours 148.5
2. Major hours ♦ 34.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 48.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 0-15.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.0
 - 16 hours per semester 9.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (22-hour list)

Latin 201, 301, 302, 321, 377, and 6 hours from 430, 431, 433, 434, 435, 436, 437, 438, 439, 440, 441, 490R (one course from ClCv 246, 307, 340R, 362, or Clscs 430R may be substituted).

Latin American Studies

See Multicultural Education.

Mathematics

Teaching Major

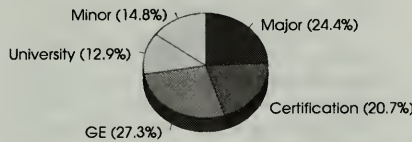
I. Math 112H, 113H, 301, 302, 343, 344, 371, CS 302, Stat 341.

II. Electives: A minimum of 6 hours from Math 300, 311, 315, 332, 350, 372, 387, 451R, 480, 487, 501, 502, 541, 542, 551, 552.

III. Math 113H and 343 are prerequisite to ScEd 276R for math majors. Math 371 is prerequisite to ScEd 476R.

IV. Each grade in the student's program must be C- or better.

Summary of Degree Requirements for Mathematics Education



1. Total hours 135.5
2. Major hours ♦ 33.0
3. Teacher certification requirements ♦ 28.0
4. General Education requirements 37.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 4.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (26-hour list)

Math 112, 113, CS 302, Math 301, 302, 343, 387, Stat 341.

Multicultural Education

Asian Studies

Teaching Minor (23- to 24-hour list)

I. One course from Anthr 312, PlSc 343, Soc 323.

II. Hist 341 and two courses from Geog 470, Hist 342, 344, 346, Hum 240, PlSc 353, 354, 384, 385, RelC 351.

III. Asian language (12 hours) (101, 102, 201).

Latin American Studies

Teaching Minor (24 hours)

I. One course from Anthr 312, PlSc 343, Soc 323.

II. Hist 360 and two courses from Anthr 326, Geog 455, Hist 352, 353, 356, 357, 359, PlSc 358.

III. Spanish or Portuguese (12 hours): 101, 102, 201.

Near Eastern Studies

Teaching Minor (23- to 24-hour list)

I. One course from Anthr 312, Soc 323.

II. Hist 302 and two courses from Anthr 340, Geog 471, Hist 303, 308, 318, 348R, Hum 242, PlSc 357, 359R, RelC 354.

III. Near Eastern language (12 hours): Either Heb 101, 102, 201; or Arab 151, 152, 251.

Music Education

See BM Music Education in the Music section of this catalog for degree requirements.

Native American Studies

Teaching Minor (22-hour list)

I. Core (14 hours): NAS 101; Hist 223, 369; 490.

II. Electives (8 hours): NAS 111, 307, 369R, Anthr 317, PlSc 346, Hist 207, 362, 363, 457, 498R*.

*Only 2 hours acceptable toward minor.

Near Eastern Studies

See Multicultural Education.

Physical Education

All physical education majors should also fulfill the core requirements specified under the Department of Physical Education section of this catalog.

Teaching Major

Sports-Public School Teaching (K-12)

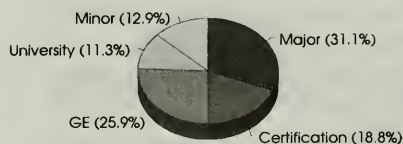
I. Core: PE 350, 361, 362, 363, 367.

II. Fundamentals: Dance 130, 180, 365, 376; PE 136, 155, 206R, 230, 231, 239, 242, 320, 450, 360, 375, 377, 378, 461; one of 235, 274, 275, or 276.

III. Specializations: (Students majoring in physical education must choose one of the two specializations)

- A. Elementary: FamSc 210; PE 376, 476.
- B. Coaching: PE 351, 430, 480; two courses from 330-348, plus 399R or equivalent team or coaching experience.

Summary of Degree Requirements for Physical Education Teaching



1. Total hours 151.5–157.0
2. Major hours ♦ 45.0–50.5
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 12.0
 - 16 hours per semester 10.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minors

Coaching–Physical Education (25-hour list)

PE 206R or 207R; 229, 234, 237, 320, 321, 330R–348, 351, 364, 365, 366, 399R, 430, 450.

Elementary Physical Education Minor (elementary education majors only) (20-hour list)

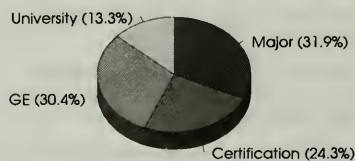
PE 136; 106, 146, or 181; 169, 364; 365 or 366; 375, 376; 379 or 461; Hlth 320; Dance 275, 365, 376, 386, plus 2 additional hours from physical education courses.

Physical Science

Composite Teaching Major

Phscs 105, 106, 107, 108, 128, 129, 130, 137; Chem 105, 106, 107, 152, 226, 227; Phscs-Hist 314; Biol 100 or 130; Geol 111, 112, 210, plus one course from 286, 351, 370, 480; Geog 401; Math 112.

Summary of Degree Requirements for Physical Science Teaching



1. Total hours 131.5
2. Major hours ♦ 42.0
3. Teacher certification requirements ♦ 32.0
4. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

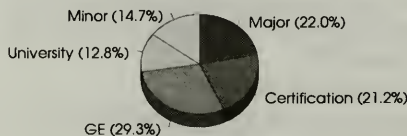
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Physics

Teaching Major

Phscs 121, 122, 214, 221, 222, 314, 340, plus 12 hours from Phscs 127, 128, 137, 167, 281, or any 300-, 400-, or 500-level course; Math 112, 113, 214; Biol 100 or 130; Phscs 314.

Summary of Degree Requirements for Physics Teaching



1. Total hours 136.5
2. Major hours ♦ 30.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0

6. PE/Health 3.5
7. Required minor 20.0
8. 40 hours upper-division GPA requirement of 2.85
9. Estimated semesters to graduate
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
10. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (24-hour list)

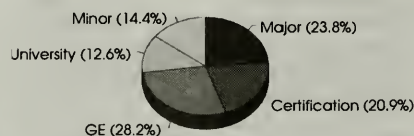
Phscs 121, 122, 214, 221, 222, 314, Math 112, 113.

Political Science

Teaching Major

- I. Required supporting: Econ 110 (take early).
- II. PISc 110, 150, 170 taken before any higher-numbered courses, although required courses may be taken in any order.
- III. Required: PISc 200 (prerequisite to all upper-division courses).
- IV. Required: PISc 201, 202 (fulfill GE History of Civilization sequence for political science majors).
- V. Electives: Remaining 21 hours, 15 of which must be upper division, drawn from political science courses.
- VI. Writing competency requirement: Senior paper (guidelines available from Political Science Department).

Summary of Degree Requirements for Political Science Teaching



1. Total hours 138.5
2. Major hours ♦ 33.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85

8. Estimated semesters to graduate
13 hours per semester 10.5
16 hours per semester 8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (24-hour list)

I. PIsc 110, 150, 170 taken before any higher-numbered courses, although required courses may be taken in any order.

II. Required: PIsc 201, 202 (fulfill GE History of Civilization sequence).

III. Electives: Remaining three courses, drawn from upper-division political science courses.

IV. Recommended: PIsc 314, 315, 376, 405.

Psychology

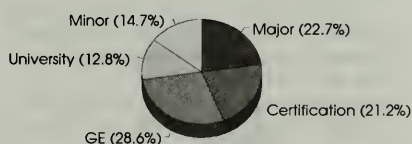
Note: Behavioral Neurobiology is now a two-semester course, Psych 381, 382. Students choosing to take Behavioral Neurobiology may complete either semester to receive credit toward a psychology teaching major or minor.

Teaching Major

I. Psych 111, 301, 302, 321 and at least one of 320, 341, 342, 350 (320 and/or 350 recommended); 361 and at least one of 365, 370, 375, 381, 382; 490.

II. The remaining hours may be selected from any psychology course, provided 22 hours are 300 level or above. At least 17 hours of psychology major credit must be taken in residence at BYU. A maximum of 13 hours may be taken as Independent Study (only 8 of which may count as residence hours); no more than 3 hours of 399R, 3 hours of 390R (Special Topics in Psychology), and 6 hours of 492R, 495R, 499R will be counted.

Summary of Degree Requirements for Psychology Teaching



1. Total hours 136.5
2. Major hours ♦ 31.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0

- Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate 10.5
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (21-hour list)

I. Psych 111, 321, 361.

II. The remaining hours may be selected from any psychology courses, though 240, 320, and 350 are recommended.

Recreation Management

Teaching Minor (16-hour list)

RMYL 311, two from 481, 485, 585; proficiency in three skill areas (see list in 273 RB); RMYL 399R (4 hours).

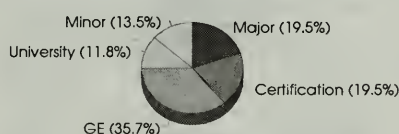
Russian

Seek advisement in the Department of Germanic and Slavic Languages, the Humanities Advisement Center, and the Education Advisement Center.

Teaching Major

Russ 202, 240, 245, 311, 312, 321, 322, 411, 412, 441, 442, 491.

Summary of Degree Requirements for Russian Teaching



1. Total hours 148.5
2. Major hours ♦ 29.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 53.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 20.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85

8. Estimated semesters to graduate 11.5
 - 13 hours per semester 11.5
 - 16 hours per semester 9.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (20-hour list)

Russ 201, 202, 240, 245, 311 or 312, 491.

Note 1: It is strongly recommended that teaching majors take Ling 330. Both teaching majors and minors must take Germ 377 or an equivalent foreign language methods class before student teaching. As a culminating course, Russian-teaching majors enroll in student teaching, ScEd 476R, where they demonstrate long- and short-term planning and complete a research project.

Note 2: Classes up to and including Russ 202 may be waived if students demonstrate proficiency in the foreign language.

Note 3: All Russian-teaching majors and minors must take a proficiency examination for departmental endorsement for teacher certification: Russ 491, Senior Russian Examination.

Note 4: All teaching majors and minors should register with the secretary in the Department of Germanic and Slavic Languages.

Social Science

Social Studies Composite Teaching Major

Minimum requirements for this endorsement to teach any class in the social sciences include 60 semester hours to be distributed as follows:

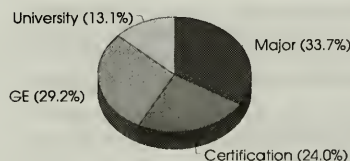
I. Minimum of 18 semester hours in history (including world, United States, and Utah). Required courses include Hist 120, 121, 201, 202, 366.

II. Minimum of 9 semester hours in geography (including physical and cultural). Required courses include Geog 101, 301.

III. Minimum of 24 semester hours distributed over remaining areas, with at least 6 in each, including an introductory or overview course in (1) economics, (2) political science, (3) psychology, and (4) sociology or anthropology. Courses to be included are Econ 110; PIsc 110; Psych 111; Soc 111, 350 or Anthr 101, 110.

IV. Remaining hours from any of the 300-or-above-level of social science courses, i.e., anthropology, economics, geography, history, political science, psychology, and sociology.

Summary of Degree Requirements for Social Science Teaching



1. Total hours 133.5
2. Major hours ♦ 45.0
3. Teacher certification requirements ♦ 32.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

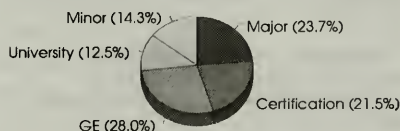
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Sociology

Teaching Major

- I. Soc 111, 205, 300, 311, 326, 350, 420, 422.
- II. Remaining hours to be selected from other sociology courses. Soc 112, 323, 351, 380 strongly recommended.

Summary of Degree Requirements for Sociology Teaching



1. Total hours 139.5
2. Major hours ♦ 33.0
3. Teacher certification requirements ♦ 30.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0

6. PE/Health 3.5
7. Required minor 20.0
8. 40 hours upper-division GPA requirement of 2.85
9. Estimated semesters to graduate
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
10. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (20-hour list)

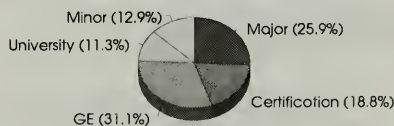
- I. Soc 111, 112, 326, 350 or 420.
- II. Remaining hours to be chosen from other sociology courses. Soc 323, 380, 383, 386, 389, 422 recommended.

Spanish

Teaching Major

- I. Span 321, 322, 326, 339, 345, 355, 377*, 378*, 441, 451, 491, plus 6 hours from 329, 365, 395R, 423, 425, 461, 480R, 490, 520, 521, 522, 539R, 540, 543, 544, 546, 548, 549R, 550, 554, 555, 556, 558, 559R.
- II. Students must also:
 - A. Meet at least the minimum requirement explained under Foreign Residency in the departmental listing.
 - B. Pass the Senior Proficiency Evaluation with a 3 (Superior) in connection with Span 491.

Summary of Degree Requirements for Spanish Teaching



1. Total hours 154.5
2. Major hours ♦ 40.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 48.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 15.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.5
 - 16 hours per semester 9.5

9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (21-hour list)

- I. Span 321, 326, 339, 345 or 355, 377*, 378*, 441 or 451, 491.
- II. Pass the Senior Proficiency Evaluation with a 3 (Superior) in connection with Span 491.

*Span 377 and 378 are required for majors and minors and must be taken before student teaching. Span 377 will be waived for students majoring in another language who have had the course in that language. If waived, students will need to take 3 additional elective hours from the 300-, 400-, or 500-level courses in Spanish.

Special Education (Mild/Moderate)

Teaching Minor (31-hour list)

- EPsy 102R, 204, 205, 305, 380R, 405, 480R, 503, 510, 586.

Technology Teacher Education

Composite Teaching Major

- I. Cluster list (8 hours): TecE 120, 140, 150.
- II. Technical core (21 hours): TecE 149, 200, 209, 229, 240, 250, CM 155, Phscs 105.
- III. Technical depth (11 hours): Majors who plan to teach junior high must select with an advisor a minimum of one class from each of four clusters; majors who plan to teach senior high must select from two depth areas; majors who plan to teach senior high T and I must have a minimum of 15 hours in one depth plus two years of industrial trade experience. *Seek advisement early in the program.*

Construction Cluster

- Construction depth: TecE 200, 301, CM 155, 210, 211, 217, 218, 241, 311, 408.
Cabinetmaking depth: TecE 205, 300, 301, 400, 490R, CM 210, 211.

Power/Energy Cluster

- Automotive depth: TecE 281, 386, 387, 388, 489, 490R.
Electronics depth: EET 103, 131, 232, 236, 245, 334, CM 241, TecE 490R.

Manufacturing Cluster

- Machine shop depth: TecE 229, 230, 239, 240, 329, 440, MET 230, 331, 335.
Welding depth: MET 224, UVCC 103, 120, 121, 232, 240, TecE 490R.

Communications Cluster

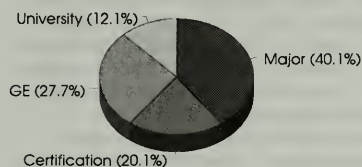
- Graphic arts depth: TecE 199R, 251, 354, 450, 453, 455, 490R.
Drafting depth: CM 305, MeEn 170, 171, 172, UVCC DT 104, 202, 206, TecE 490R.

IV. Professional core: TecE 291R or 391R, 325, 340, 405, 470, 477, 491R.

V. Mathematics sequence: Math 110 or 111, CS 103, TecE 270.

VI. National Teacher Exam. Fee.

Summary of Degree Requirements for Technology Teacher Education



1. Total hours 144.5
2. Major hours ♦ 58.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.5
 - 16 hours per semester 8.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

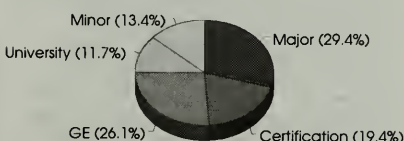
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Theatre and Film

Teaching Major

ThF 116, 117, 121, 123, 127R, 140, 141, 142, 143R, 200, 201, 220, 261, 325R; two of 340, 341, or 343R; 361, 377, 461, 552R.

Summary of Degree Requirements for Theatre Education



1. Total hours 149.5
2. Major hours ♦ 44.0
3. Teacher certification requirements ♦ 29.0
4. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0

- Arts and Sciences electives 12.0
- Advanced Math/Foreign Language 6.0
- Advanced Writing 3.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Required minor 20.0
7. 40 hours upper-division GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 11.5
 - 16 hours per semester 9.5
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Teaching Minor (28-hour list)

ThF 116, 121, 123, 127, 140, 141, 142, 200 or 201, 220, 261, 361, 377, 461.

Secondary Education

Undergraduate Courses

276R. Exploration of Teaching. (4:Arr.:Arr. ea.) F, W Prerequisite: 30 semester hours or sophomore status; cumulative GPA of 2.85 or higher.

Field-based, team-taught, initial teaching experience that helps potential teachers identify their strengths and weaknesses in viable educational settings.

326. Foundations of Teaching. (2:2:0) F, W, Su

Knowledge base of teaching, including social, legal, familial, governmental, technological, and empirical impacts upon the teacher's personal and professional life.

351. Multicultural and Exceptional Education. (2:2:0) F, W, Sp Su Prerequisite: ScEd 276R.

Promoting constructive interaction both with students of differing economic, social, racial, and ethnic backgrounds and students with exceptional physical and mental conditions.

376R. (ScEd-IS) Theory and Methods of Secondary Teaching. (1-2:Arr.:Arr. ea.) F, W, Sp, Su Independent Study also for secondary education.

See department for individual section descriptions.

377. Teaching Methods and Instruction. (3:3:0) F, W Prerequisite: ScEd 276R.

Teaching secondary-specific courses in science or social studies; discussions, demonstrations, materials, planning. Students must enroll for the section that corresponds with the appropriate teaching major.

476R. Secondary Student Teaching and Reading in the Content Area. (1-15:Arr.:Arr. ea.) F, W Prerequisite: 2.85 cumulative GPA; acceptance to certification program in College of Education; completion of 276R, 351, appropriate 377, and at least 3 credit hours of ScEd 376R modules; successful completion of at least 24 hours in teaching major and 12 hours in teaching minor (must meet department requirements) or 36 hours in composite teaching major.

Professional education certification experience for all approved secondary teacher candidates. Theory and practice for student needs, specific subject instruction, reading in the content area, curriculum development, evaluation, classroom management, professional education. Fee.

490R. Senior Seminar. (1-2:2:0 ea.) F, W, Sp, Su Prerequisite: instructor's consent.

493R. Readings. (1-2:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: instructor's consent.

Advanced Undergraduate or Graduate Courses

514R. Special Topics in Secondary Education. (1-3:3:3 ea.) On dem.

Note: ScEd 514R and 515R are for recertification only. These courses do not count toward preservice secondary certification or graduate degrees.

- Computers in Education
- Curriculum and Instruction
- Fine Arts Education
- Foreign Language Education
- Health and Physical Education
- Language Arts Education
- Mathematics and Computer Science Education
- Middle Education
- Reading in the Content Area
- Science Education
- Social Science Education
- Vocational Education

515R. Special Topics in Education.

(1-3:Arr.:1 ea.) On dem. These courses must have prior approval of department to count toward graduate degrees.

- Middle Education
- Reading in the Content Area
- Science Education
- Secondary Curriculum
- Secondary Instruction
- Teaching and Learning

531. Effective Classroom Instruction. (2:2:Arr.) F, Su

Developing strategies to initiate and maintain effective learning in elementary and secondary classrooms. Expanding teaching perspectives and acquiring observation skills.

539R. Practicum in Learning and Teaching. (1-8:Arr.:Arr. ea.) F, W, Sp, Su

Experience in a school setting under direction of college faculty.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

601. Structure, Function, and Outcomes of Education. (3:3:Arr.)

606. Western Educational Thought and Practice. (3:3:Arr.)

607. Multicultural Education. (3:Arr.:Arr.)

649. College and Adult Basic Reading. (2:2:Arr.)

660. Historical Foundations in Reading. (2:2:0)

693R. Directed Individual Study. (1-4:Arr.:Arr. ea.)

698R. Master's Project. (1-6:Arr.:9 ea.)

699R. Master's Thesis. (1-6:Arr.:9 ea.)

Electrical and Computer Engineering

See Engineering.

Electronics Engineering Technology

See Engineering.

Elementary Education

See Education.

Engineering

Chemical Engineering

Richard L. Rowley, Chair (350 CB)

Professors

Bartholomew, Calvin H. (1973) BES, Brigham Young U., 1968; MS, PhD, Stanford U., 1970, 1972.

Beckstead, Merrill W. (1977) BS, PhD, U. of Utah, 1961, 1965.

Bennion, Douglas N. (1980) BS, Oregon State U., 1957; PhD, U. of California, Berkeley, 1964.

Hedman, Paul O. (1977) BS, U. of Utah, 1957; PhD, Brigham Young U., 1973.

Rowley, Richard L. (1984) BS, Brigham Young U., 1974; PhD, Michigan State U., 1978.

Smoot, L. Douglas, Dean (1967) BS, BES, Brigham Young U., 1957, 1957; MS, PhD, U. of Washington, 1958, 1960.

Solen, Kenneth A. (1976) BS, U. of California, Berkeley, 1968; MS, PhD, U. of Wisconsin, Madison, 1972, 1974.

Terry, Ronald E. (1987) BS, Oregon State U., 1971, PhD, Brigham Young U., 1976.

Associate Professors

Fletcher, Thomas H. (1991) BS, MS, PhD, Brigham Young U., 1979, 1980, 1983.

Hecker, William C. (1982) BS, MS, Brigham Young U., 1974, 1975; PhD, U. of California, Berkeley, 1982.

Oscarson, John L. (1974) BES, Brigham Young U., 1968; MS, PhD, U. of Michigan, 1972, 1985.

Assistant Professors

Harb, John N. (1988) BS, Brigham Young U., 1983, PhD, U. of Illinois, 1988.

Pitt, William G. (1987) BS, Brigham Young U., 1983, PhD, U. of Wisconsin, Madison, 1987.

Emeriti

Barker, Dee H. (1959) BS, PhD, U. of Utah, 1948, 1951.

Hanks, Richard W. (1963) BES, Yale U., 1957; PhD, U. of Utah, 1960.

Pope, Bill J. (1958) BS, U. of Utah, 1947; MS, PhD, U. of Washington, 1948, 1959.

Programs and Degrees

BS	Chemical Engineering
MS	Chemical Engineering
PhD	(Chemical) Engineering

The BS curriculum is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (ABET) and the American Institute of Chemical Engineers.

Professional chemical engineers find employment in a wide range of fields from semiconductor fabrication and environmental control to medical aids manufacturing, with many working with chemicals, petroleum refining, and petrochemicals. Their principal activity is to change raw materials into useful and valuable products by applying a basic knowledge of chemistry, physics, mathematics, and economics. Using this knowledge, they conduct research on processes; market products; and design, build, operate, and manage complex manufacturing plants.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Entrance requirements for the bachelor of science (BS) program are similar for all

branches of engineering at BYU and are specified in detail in the College of Engineering and Technology section of this catalog.

BS Chemical Engineering

The Chemical Engineering Department offers a professional program leading to the bachelor of science degree. The first two years of this program are considered to be preprofessional and permit unrestricted enrollment for any student who qualifies for admission to the university. The remaining two years are considered to constitute the professional program.

Any student who is admitted to the university may choose this program as a possible major. All students are urged to declare their intention to major in the department upon first entry to the university or as soon thereafter as possible by contacting the college advisement center (264 CB). Students electing to major in this program must successfully complete the specified set of minimum preprofessional program requirements listed below before applying for acceptance into the department professional program.

I. Minimum application requirements: The minimum department application requirements for both continuing and transfer students are:

- A. Completion of at least 30 semester hours of graded university-level credit.
- B. Completion of the following courses or their equivalent:
 1. Math 112, 113
 2. Chem 105, 106, 107; or 111, 112
 3. ChEn 170
- C. A minimum grade of C- in each course of item B above, together with a university cumulative GPA of at least 2.0.
- D. Submission of an application to the department.

Preprofessional students enrolled at BYU are also required to enroll in the department seminar 291R both semesters of the freshman year. A preprofessional student may not take any chemical engineering courses at the junior level or above.

II. Application procedure: Application for acceptance to the professional program may be made at any time after the preprofessional requirements are completed. The deadlines for application are June 1 for fall semester, October 1 for winter semester, and February 1 for spring term. The department may accept students at other times during the year, however. Transfer students must have been admitted to the university before application can be made to the professional program. Application forms are available in the college advisement center (264 CB).

Acceptance is normally granted for entry into the program the fall semester that the

student will take ChEn 374 (which is considered the entry-level course). Acceptance at other times of the year will only be granted in exceptional cases. Final decisions will be made each summer.

Acceptance to the professional program will be based on the GPA for courses in the preceding section I.B. If the GPA for those classes is below 3.0, the department will also consider student academic performance in ChEn 273, 283; Chem 223 or 226; Phscs 121, 122; and Math 312. An interview may be required. The exact number of students accepted each year by the department is determined by available space and resources. However, no student will be admitted to the program with a GPA below 2.7 in the ten courses referenced.

Students not accepted on their first application may continue taking the sophomore courses and apply a second time the next year. For those applying a second time, acceptance will be based on the GPA for the ten courses referenced above. If courses have been repeated, both original and repeated grades will be used to calculate the GPA.

III. Academic standards and continuance: On gaining acceptance to the professional program, students must maintain the following minimum academic standards. Failure to do so may result in being terminated from the program.

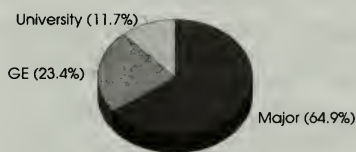
- A. To continue in the professional program the student must continuously maintain a minimum university cumulative GPA of 2.0. Anyone who accumulates grades below C- in excess of 6 hours in the professional program courses may not take further professional program courses until he or she has reduced the number of credits of each unacceptable grade (through retaking courses) to 6 hours or less.
- B. In addition, if the student receives more than 9 credit hours of original grades below C- in the professional program courses, he or she will be discontinued from the program. An "original grade" is defined in this case as a grade received when the course is first taken regardless of whether the course was later repeated and a higher grade received. Appeals may be considered by a departmental committee.
- C. Furthermore, a student may not repeat the same professional program course more than once.
- D. Finally, a student may not graduate with more than 3 hours below C- in professional program courses.

Transfer Students. Provisions have been made so that a qualified student transferring from a junior college or from another university, college, or department, who has completed the equivalent of the first two years of the academic program,

can complete the BS degree requirements in two years. Contact the department at the earliest date possible so that any variations can be accommodated with minimum loss of time.

Course Requirements: Math 112, 113, 312, 313, (14 hours); Phscs 121, 122 (6 hours); ECEn 301R (2 hours); Engl 316 (3 hours); Chem 111, 112 (or 105, 106, 107), 226, 351, 352, 353, 461, 3 credits advanced chemistry (22 hours); ChEn 170, 273, 283, 291R, 373, 374, 376, 378, 436, 451, 475, 476, 477, 478, 491 (37 hours); Econ 110 (3 hours); courses from options (12 hours).

Summary of Degree Requirements for BS Chemical Engineering



- | | |
|--|-------|
| 1. Total hours | 132.5 |
| 2. Major hours* | 86.0 |
| 3. General Education requirements | 31.0 |
| Core | 12.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 9.0 |
| Advanced Math/Foreign Language | 4.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 15.5 |
| Religion | 14.0 |
| PE/Health | 1.5 |
| 5. Elective hours | 0.0 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.5 |
| 16 hours per semester | 8.5 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

*Note: Hours do not include any course that could be used to fill GE or university requirements.

All student programs must include university General Education and major requirements.

Summaries of the General Education requirements for engineering students are available in the advisement center, 264 CB. Note that Engl 316 and Econ 110 are departmental as well as General Education requirements.

The suggested sequence of courses and requirements for the options are given below. Students should contact the department secretary for an advisor assignment at the earliest possible date so they can receive help planning their program.

Suggested Sequence of Courses

First Year	F	W
ChEn 170**, 291R	2	0
Chem 111, 112, 226	3	6
Econ 110	3	
Math 112, 113	4	4
Second Year		
ChEn 273*, 283	3	2
Chem 351, 352, 353	3	4
Math 312, 313	3	3
Phscs 121, 122	3	3
Third Year (Regular BYU Enrollment)		
ChEn 378, 373	3	3
ChEn 374, 376, 478	3	6
Chem 461, advanced chemistry	3	3
ECEn 301	2	
Engl 316		3
Third Year (Transfer Students)		
ChEn 170**	2	
ChEn 273*, 283, 478	3	6
ChEn 374, 376	3	3
ChEn 378, 373	3	3
Chem 461, advanced chemistry	3	3
ECEn 301		2
Engl 316		3
Fourth Year		
ChEn 475*, 477*, 451	2	2, 4
ChEn 436, 476	6	
ChEn 491**	1	
Option electives	6	6

*May be taken spring term

**May be taken winter semester

Note 1: Chem 105, 106, 107; 223 or 226 may be substituted for Chem 111, 112, 226, depending on high school chemistry background.

Note 2: Students transferring into the junior year should have completed calculus, differential equations, inorganic and organic chemistry, and physics (see the General Education section of this catalog for General Education requirements). Students who have not had one or more of these courses will need to arrange to take the missing courses, consulting with their advisor to plan an appropriate academic schedule.

Transferring students who have had courses in Fortran programming and technical report writing are excused from ChEn 283 and Engl 316, respectively. A student with skills in commercial software including spreadsheets, graphics, and math packages may replace ChEn 170 with a chemical engineering elective. A transfer student who must still take all (or nearly all) the classes indicated is advised to take some of the classes spring or summer term to avoid excessive loads fall and winter semesters.

Note 3: The advanced chemistry requirement is satisfied by taking 3 credits of any upper-division chemistry courses (300 level or higher, except Chem 491) in addition to those required chemistry courses and credits listed above.

Note 4: Math 312, 313 can be substituted for Math 114, 215, 321 and vice versa.

Options

The curriculum outlined above leading to the BS degree in chemical engineering provides for a minimum of 12 semester hours of technical or option electives. To meet accreditation requirements and provide for maximum flexibility in student course selection, the department has outlined a series of options, or students may also design their own technical option subject to obtaining approval in advance from their advisor and the department. Minimum requirements for a technical option are as follows:

1. The set of courses must include at least 5 hours of engineering, of which at least 2 must be designated engineering science. (For deviations from the options outlined below, the student must obtain approval in writing from the department to insure that this requirement is satisfied.)
2. The set of courses must include at least 2 hours of mathematics or statistics in addition to the basic courses listed above.
3. The courses selected must be upper-division technical courses (i.e., engineering, science, mathematics, or business).

The student may select one of the following options or may use it as a model in designing a different one in consultation with an advisor.

Energy, Fossil Fuels, and Environment.

Chemical engineering provides an ideal background for students interested in technical energy, combustion, and environmental problems such as coal gasification, power plant design, and pollution control.

I. Required (8 hours): ChEn 310, 411; mathematics (2).

II. Elective (4 hours): ChEn 412, 533, 633, 672; Chem 759R; CivE 550 (highly recommended for environmental emphasis), 555; MeEn 422, 521; Geol 520.

Bioengineering and Premedicine. This option provides training in the area of biochemical engineering or the area of biomedical engineering (for research in such areas as artificial organs, drug distribution, or biological mass transport) or to supplement preparation for study in the field of medicine (see also the Preprofessional Programs section of this catalog).

I. Required (8 hours): ChEn 518 (or 411 if 518 is not offered), 533; mathematics (2).

II. Elective (4 hours): Chem 468, 581, 582, 584; Mcbio 361, 375, 385, 401, 521; Zool 460, 461, 476, 484.

Research. This prepares for entry into graduate school and/or for employment in

the field of industrial research and development.

I. Required (9 hours): two courses from ChEn 531, 533, 535, 672; one course from Math 322, 323, 344.

II. Elective (3 hours): ChEn 499R, 500, 536, 541; Math 411, 415, 480, 512, 513R; MeEn 512, 531, 541; Stat 361, 421, 462; Phscs 317, 318; any remaining courses from item I.

Nuclear Engineering. Production of power in the future may depend heavily on nuclear reactors. Many chemical engineers are now working in this field of endeavor.

I. Required (9 hours): ChEn 412, 533; Math 323.

II. Elective (3 hours): Phscs 221, 222; Math 411; Chem 462, 522, 564.

Management. A large number of chemical engineers are employed as managers in the chemical industry.

I. Required (8 hours): ChEn 310, 411; mathematics (2).

II. Elective (4 hours): ChEn 412, 493R, 500; BusM 300, 340, 361.

Computer Applications. This option provides an emphasis on computer-oriented applications with advanced training in computer programming techniques, microprocessor fundamentals, and numerical applications.

I. Required (9 hours): ChEn 536 or 541; ECEn 301 (for 3 hours), 324; Math 311 or 411.

II. Elective (3 hours): ChEn 534; CS 231; Math 411, Stat 361; EET 340, 341; MeEn 541, 575, 577, 631; DET 337, 437; ECEn 327.

Semiconductor Fabrication. An increasing number of chemical engineers are employed in the electronics industry, where they apply chemical engineering principles to fabricating semiconductors and related integrated currents.

I. Required (8 hours): ChEn 533; ECEn 553; Math 323.

II. Elective (4 hours): ChEn 619; Chem 462, 514; Phscs 221, 222, 281; ECEn 351.

Materials. A recent emphasis in chemical engineering is the production of polymers, ceramics, and composites. This option provides training in these areas.

I. Required (9 hours): Two courses from ChEn 578, 678, MeEn 551, 553, 556, 560; one course from Math 322, 323, 344, Stat 321.

II. Elective (3 hours): ChEn 500, MeEn 501, 505, 538, 557, 575, Phscs 581.

Integrated Master's Program

At the end of the sophomore year or during the junior year, a student who desires to obtain a master's degree in chemical engineering may elect to enter the integrated master's program. The purpose of this

program is to afford greater flexibility in scheduling course work than is normally available through the traditional BS degree followed by MS degree program. In this program students may work toward both the bachelor's and master's degrees simultaneously, either receiving the BS degree before or at the same time as the MS degree. At the end of the sophomore year students must have a cumulative GPA of 3.4 or more. All credit to be counted toward the master's degree must carry a cumulative GPA of 3.0 or better.

Before completing the final 30 hours of undergraduate course work, students should submit a formal application for admission to the Office of Graduate Studies. Additional details may be obtained from the college advisement center.

Professional Registration

The Chemical Engineering Department encourages graduates to become registered professional engineers. General qualifications for becoming registered are explained in the College of Engineering and Technology section of this catalog. Some states require this status for consulting and practice in the private sector. The basic chemical engineering program outline prepares graduates to successfully complete the Fundamentals of Engineering (FE) examination. Students who wish to become registered as professional engineers are also advised to talk to their advisor about developing their own professional engineering option, which may include additional FE preparation courses.

Chemical Engineering (ChEn)

Undergraduate Courses

170. Introduction to Chemical Engineering. (2:2:1) F, W

Principles of chemical processes and analyses with spreadsheets, graphics, and math software. Applying chemical engineering to current problems.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

273. Chemical Process Principles. (3:3:0) F, Sp Prerequisite: ChEn 170 or equivalent; Chem 106 or 112; concurrent registration in Phscs 121, Math 113.

Material and energy balances. College Lecture attendance required.

283. Computer Programming for Chemical Engineers. (2:2:0) W, Su Prerequisite: Math 112 or equivalent; ChEn 170 or concurrent registration.

Use of computers to solve engineering problems; Fortran programming and numerical methods of problem solving. College Lecture attendance required.

291R. Preprofessional Seminar. (0:1:0 ea.) F, W

Presentations by faculty, advisors, and industrial representatives. College Lecture attendance required. Required both semesters of freshman year.

310. Introduction to Fossil Fuels and Combustion. (3:3:0) F

Energy sources, demands, and processes; costs and environmental studies; case studies of various fossil fuel and alternate energy sources; introduction to combustion and flames.

373. Chemical Engineering Thermodynamics. (3:3:0) W Prerequisite: Chem 461; concurrent registration in ChEn 273.

First and second laws of thermodynamics as applied to behavior of real fluids; physical and chemical equilibrium.

374. Fluid Mechanics. (3:3:0) F Prerequisite: Math 312, ChEn 273.

Basic mass, momentum, and energy relations of fluid flow; design of fluid-handling systems and equipment.

376. Heat and Mass Transfer. (3:3:0) W Prerequisite: ChEn 374, Math 313.

Heat and mass transfer, including conduction, convection, radiation, diffusion; steady and unsteady state systems; transport analogies; design applications.

378. Science of Engineering Materials. (3:3:0) F Prerequisite: Chem 351 or instructor's consent.

Fundamental principles of solid materials and their properties and behavior in engineering applications of metals, polymers, ceramics, and glasses.

411. Air Pollution Control. (3:3:0) W Prerequisite: instructor's consent. Recommended: junior standing or higher.

Causes and effects of air pollution; standards, criteria, and legislation; dispersion, meteorology, and atmospheric chemistry. Includes design project and use of impact statements.

412. Introductory Nuclear Engineering. (3:3:0) W Prerequisite: Math 313; Chem 106 or 112.

Principles and application of nuclear reactor design.

436. Process Control and Dynamics. (3:3:0) F Prerequisite: Math 313, ChEn 376, 478.

Process systems, associated control systems, and instrumentation. Use of Laplace transforms and complex variables.

451. Chemical Engineering Plant Design and Process Synthesis. (4:4:0) W Prerequisite: ChEn 476.

Design of chemical engineering machinery; plants and/or processes requiring application of unit operations; chemical process principles; economic analysis. Synthesis and optimization of chemical processes.

475. Unit Operations Laboratory 1. (2:1:6) F, Sp Prerequisite: ChEn 374, 376; Engl 316.

Experimental verification of unit operations design principles, data collection and reduction, and report preparation.

476. Separations. (3:3:0) F Prerequisite: ChEn 376.

Stage operations, distillation, extraction, and absorption; design applications.

477. Unit Operations Laboratory 2. (2:1:6) W, Sp Prerequisite: ChEn 476, 478. Recommended: ChEn 475.

Experimental verification of unit operations design principles, data collection and reduction, and report preparation.

478. Chemical Reaction Engineering. (3:3:0) W Prerequisite: ChEn 373 or Chem 461.

Fundamental principles and equations of chemical kinetics and reactor design.

491. Senior Seminar. (1:1:0) F, W

Technical presentations by students. One semester required of all majors in the senior year.

493R. Special Topics—Undergraduate (1–3:3:Arr. ea.) Prerequisite: instructor's consent.

Classroom study based on student and faculty interest.

497R, 498R. Undergraduate Research. (1–3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: faculty committee approval.

Final report required; 2 hours maximum allowed for degree credit.

499R. Undergraduate Thesis Research. (1–3:Arr.:Arr. ea.) F, W, Sp, Su

Advanced Undergraduate or Graduate Courses

500. Creative Skills in Chemical Engineering. (1:1:0) F

Applying creativity and technical knowledge from prior course work to the solution of relevant, open-ended problems.

501. Directed Graduate Studies. (2:2:0) W Prerequisite: ChEn 531, 533, 535.

Guided preparation for department comprehensive examinations and for formulation of research prospectus.

510. Principles of Reservoir Engineering. (3:3:0) Prerequisite: ChEn 373.

Reservoir and hydrocarbon classification; fluid flow; primary oil and gas recovery mechanisms; enhanced oil recovery.

518. Biomedical Engineering Principles. (3:3:0) Alt. yr. Prerequisite: ChEn 376, Math 312.

Applying chemical engineering principles to model physiologic systems and to solve medical problems.

531. Thermodynamics of Multicomponent Systems. (3:3:0) F Prerequisite: ChEn 373 or Chem 461.

Fundamental concepts and applications in first and second laws, equilibrium and stability, phase equilibrium, homogeneous and heterogeneous chemical equilibrium.

533. Transport Phenomena. (3:3:0) F Prerequisite: concurrent registration in ChEn 476. Recommended: Math 323.

Transport mechanisms and coefficients; fundamental field equations for momentum, heat, and mass transport, with application to system design.

534. Advanced Separations. (3:3:0) Alt yr. Prerequisite: ChEn 533, Math 313.

General theory of differential and stagewise diffusional and separation operations, multicomponent distillation, extraction, and absorption; applying this theory to solution of complex problems, including column design and instrumentation.

535. Kinetics and Catalysis. (3:3:0) F Prerequisite: ChEn 478.

Theories and principles of chemical kinetics, including heterogeneous catalysis and reactor design.

536. Digital Process Control. (2:1:3) W Prerequisite: ChEn 436.

Computer application of advanced control algorithms to chemical processes.

541. Computer Design Methods. (2:1:3) Alt. yr. Prerequisite: Math 311, ChEn 376.

Computer-aided design and numerical methods of chemical engineering processes.

578. Polymer Science and Engineering. (3:3:0) Sp Prerequisite: Introductory materials engineering course.

Fundamentals of polymer chemistry and physics and their implications in engineering applications. Topics include polymerization chemistry, structure-property relationships, polymer physics, and transport properties.

583. Nuclear Reactor Engineering. (3:3:0) On dem. Prerequisite: ChEn 412.

Nuclear reactor design, including heat transfer, energy conversion, reactor materials, instrumentation and control, fuel management, economics, and comparison of principal power system concepts.

591R. Combustion Seminar. (0.5:1:0 ea.) F, W

Combustion-related technical presentations by faculty and invited speakers.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

- 619. Electrochemical Engineering Fundamentals. (3:3:0)
- 631. Applied Statistical Mechanics. (3:3:0)
- 633. Combustion Processes. (3:3:0)
- 635. Advanced Topics in Catalysis and Kinetics. (1–3:3:0)
- 641. Combustion Modeling. (3:3:0)
- 672. Advanced Fluid Mechanics. (3:3:0)
- 674. Advanced Thermodynamics. (2:2:0)
- 678. Colloid and Surface Phenomena. (3:3:0)
- 685. Chemical Engineering for Chemistry Students. (6:5:1)
- 691R. Seminar for Master's Students. (0.5:1:0 ea.)
- 693R. Special Topics—Graduate. (1–6:Arr.:Arr. ea.)
- 697R. Special Problems—Graduate. (2–6:Arr.:Arr. ea.)
- 698R. Master's Project. (1–6:Arr.:Arr. ea.)
- 699R. Master's Thesis. (1–9:Arr.:Arr. ea.)
- 733. Coal Combustion. (3:3:0)
- 791R. Seminar for Doctoral Students. (0.5:1:0 ea.)
- 793R. Selected Topics in Chemical Engineering. (1–3:Arr.:Arr. ea.)
- 799R. Doctoral Dissertation. (1–9:Arr.:Arr. ea.)

- Wilson, Arnold (1957) BS, MS, Brigham Young U., 1957, 1962; PhD, Oklahoma State U., 1973.
- Youd, T. Leslie (1984) BES, Brigham Young U., 1964; PhD, Iowa State U., 1967.

Associate Professors

- Goodwin, Reese J. (1967) BES, MS, Brigham Young U., 1962, 1963; PhD, U. of Utah, 1976.
- Sederberg, Thomas W. (1978) BS, MS, Brigham Young U., 1975, 1977; PhD, Purdue U., 1983.
- Thurgood, Glen S. (1967) BES, MS, Brigham Young U., 1965, 1967; PhD, Texas A&M U., 1975.
- Wallace, Lynn P. (1983) BS, U. of Utah, 1963; MS, PhD, West Virginia U., 1968, 1970.

Assistant Professors

- Borup, M. Brett (1987) BS, Humboldt State U., 1980; MS, Utah State U., 1982; PhD, Clemson U., 1985.
- Jones, Norman L. (1991) BS, Brigham Young U., 1986; MS, PhD, U. of Texas, Austin, 1988, 1990.
- Rollins, Kyle M. (1987) BS, Brigham Young U., 1982; PhD, U. of California, Berkeley, 1987.

Emeriti

- Calder, Glen H. (1955) BS, MS, Utah State U., 1952, 1953.
- Enke, Glenn L. (1962) BS, U. of California, Berkeley, 1928.
- Firmage, D. Allan (1955) BS, U. of Utah, 1940; MS, Massachusetts Inst. of Technology, 1941.
- Fuhrman, Dean K. (1954) BS, MS, Utah State U., 1941, 1950; PhD, U. of Wisconsin, Madison, 1952.
- Rollins, Ralph L. (1956) BS, MS, Utah State U., 1941, 1949; PhD, Iowa State U. of Science and Technology, 1954.

Programs and Degrees

BS	Civil Engineering
MS	Civil Engineering
MEM	Engineering Management
PhD	Engineering

The curriculum leading to the BS degree is fully accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (ABET).

Course work is offered in the areas of solid mechanics and materials, geotechnical engineering, structural mechanics and structural engineering, highway and transportation engineering, water resources, and environmental engineering.

The Civil Engineering Department requires acceptance into the junior level of the professional program, details of which are covered in the Program Requirements section following.

Qualified students from junior colleges with adequate preengineering programs can normally complete the BS degree in two additional years. Students who transfer into

the department from other universities or from other departments at BYU will be placed in the civil engineering program according to an evaluation of completed work. Prospective transfer students should contact the department as soon as possible so that any variations can be accommodated with a minimum loss of time.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

BS Civil Engineering

Professional Bachelor's Program

The bachelor's degree course work is composed of preprofessional and professional programs. The preprofessional program is available to any student who has been admitted to the university. All students are urged to declare their intention to major in the department upon first entry to the university or as soon thereafter as possible by contacting the college advisement center (264 CB). Before students can enroll in junior-level professional program courses (300 and higher course numbers), they must be accepted into the professional program.

Students electing to major in this professional program must successfully complete the specified set of preprofessional program requirements listed below before an application for acceptance into the professional program can be submitted.

1. Minimum requirements for admission to the professional program for both continuing and transfer students are:
 - A. Completion of at least 30 semester hours of graded university-level credit.
 - B. Completion of Math 113, Chem 106, MeEn 212, CivE 103, or their equivalent.
 - C. A minimum grade of C– in each course of item B above, together with a university cumulative GPA of at least 2.0.
 - D. Submission of an application to the department.

Preprofessional students enrolled at BYU are also required to enroll in the department seminar sequence (CivE 100A,B, 200A,B) in each semester of residence. Applications for acceptance into the professional program will be reviewed by the department, and acceptance will be based primarily on the academic performance in Math 113, Chem 106, MeEn 212, and CivE 103. Standards may vary according to the competition for available positions. The department may consider GPA in other technical courses in exceptional cases, and an interview might be required. The number of students to be accepted each year by the department is

Civil Engineering

S. Olani Durrant, Chair (368-C CB)

Professors

- Balling, Richard J. (1982) BA, BS, U. of Utah, 1978; MS, PhD, U. of California, Berkeley, 1979, 1982.
- Benzley, Steven E. (1980) BES, MS, Brigham Young U., 1966, 1967; PhD, U. of California, Davis, 1971.
- Budge, W. Don (1964) BS, MS, Utah State U., 1959, 1961; PhD, U. of Colorado, 1964.
- Christiansen, Henry N. (1965) BS, Utah State U., 1957; MS, PhD, Stanford U., 1958, 1962.
- Durrant, S. Olani (1970) BES, MS, Brigham Young U., 1962, 1963; ScD, New Mexico State U., 1969.
- Merritt, LaVere B. (1970) BS, MS, U. of Utah, 1963, 1966; PhD, U. of Washington, 1970.
- Miller, A. Woodruff (1974) BES, Brigham Young U., 1969; MS, ENG, PhD, Stanford U., 1970, 1972, 1975.

determined by available space and resources. *Currently there is ample space in the program for all qualified applicants.* It is recommended that students contemplating missionary service plan to complete their mission before applying for the professional program.

II. Application procedure: Application for acceptance into the professional program may be made any time after the preprofessional requirements are completed. The deadlines for application are June 1 for fall semester, October 1 for winter semester, and February 1 for spring term. The department may accept students at other times during the year, however. Transfer students must have been admitted to the university before application can be made to the professional program. Application forms are available in the college advisement center (264 CB).

III. Academic standards and continuance: On gaining acceptance into the professional program, students must maintain a minimum university cumulative GPA of 2.0. Anyone who accumulates grades below C— in excess of 9 semester credit hours may not take further professional program courses or graduate until he or she has reduced the number of credits of such unacceptable grades (through retaking courses) to 9 hours or less. A student may not repeat an upper-division civil engineering course more than once.

All potential termination situations will be reviewed by a faculty committee, who will recommend action to be taken.

Suggested Sequence of Courses

Preprofessional Program

First Year	F	W	Hours
CivE	100A	100B	1
Chem	105	106	7
Math	112 ^a	113	8
MeEn	(170) ^b	212	3
Engl	115		3
AHtg		100	3
RelA	121	122	4
PE 129 and 1 other		1	

Second Year

Math	312	313	6
Geol		330	3
CivE	103		2
CivE	113	203	6
CivE	270	204	6
CivE	200A	200B	1
RelA	211		2
RelC		324	2
Biol	100		3
Social and Behavioral Sciences ^c		1 course	3

Professional Program

Third Year			
Phscs	122	221	6
CivE	321	205	6
CivE	332	341	6

CivE	361	351	6
CivE		370	3
CivE	391A	391B	1
Arts and Letters ^c		1 course	3
Religion		1 course	2
PE	1 course		0.5

Fourth Year

Engl	316 ^e		3
CivE	424 or	423	3
CivE	433 or	431	3
CivE		495	1
CivE	491A	491B	1
Eng. science ^d	1 course		3
"Design" and other technical electives ^f	1 course	2 courses	9
History of Civilization ^c	1 course	1 course	6
RelC		491, 492	2
Religion	1 course		2

- When the mathematics placement exam indicates student is not fully prepared to take Math 112, he or she should register instead for Math 110 and 111.
- High school drafting, including some computer-aided drafting, is usually sufficient preparation to bypass MeEn 170.
- Recommended to fill General Education requirements:
 - Arts and Letters: Phil 205 or Art 210.
 - Social and Behavioral Sciences: Econ 110 or PISc 110.
 - History of Civilization: Phil 210, 211.
- Engineering science requirement: One of ChEn 273, 378, ECEn 301, MeEn 250, 321, 401.
- Engl 316 also fills General Education requirement.
- Technical electives: Must include at least 3 "design" credits (see list available in Civil Engineering Department).
Any technical elective taken outside civil engineering must receive written approval by department before student takes course. See Civil Engineering Department for procedure.
Up to 3 credit hours of approved Cooperative Education may be used for nondesign technical elective credit.

Summary of Degree Requirements for BS Civil Engineering

University (11.9%)	
GE (24.5%)	
Major (63.6%)	
1. Total hours	130.5
2. Major hours [♦]	83.0
3. General Education requirements	32.0
Core	12.0
First-Year Writing	3.0
Arts and Sciences electives	10.0

Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	15.5
Religion	14.0
PE/Health	1.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Integrated Master's Program

Although excellent and abundant professional opportunities are available with a bachelor's degree, future professional opportunities are markedly improved by completing a master's degree.

At the end of the sophomore year or during the junior year of the civil engineering curriculum, those who have been accepted to the professional program and who desire to obtain a master's degree in civil engineering (MS) are encouraged to enter the integrated master's program. In this program students may work toward both the bachelor's and master's degrees concurrently, and the BS degree may be received before or simultaneously with receiving the MS degree.

Applicants to the integrated program must have a cumulative GPA of 2.5 or higher. All credit to be counted toward the master's degree must carry a cumulative GPA of 3.0 or better. When students are within 30 credit hours of completing the graduate degree, they must also apply for and be admitted to graduate study.

Before completion of the first semester in graduate school, students must file with the Office of Graduate Studies an approved, final schedule of courses. The form for this may be obtained from the department secretary. Contact the department graduate coordinator for procedures and other details.

Professional Engineer Registration

The Civil Engineering Department encourages graduates to become registered professional engineers. General qualifications for becoming registered are explained in the College of Engineering and Technology section of this catalog. This status is vital to engineering practice in the public sector and to much consulting work. The civil engineering program gives adequate preparation for graduates to successfully complete the Fundamentals of Engineering (FE) examination, an important step in becoming registered. Students who wish to strengthen their preparation for the FE exam

should select their required engineering science course with this need in mind.

Prearchitecture Curriculum Program

Brigham Young University does not have a school of architecture, but civil engineering is an excellent preparatory program for architecture. Students are also invited to come into the department for counseling concerning a prearchitecture program.

Civil Engineering (CivE)

Undergraduate Courses

100A,B. Introduction to Civil Engineering 1. (0.5:1:0 ea.) F, W

Activities of civil engineering; principles and methods involved in solving civil engineering problems. College Lecture attendance required.

103. Engineering Mechanics—Statics. (2:2:0) F, W; Sp even yr.; Su odd yr. Independent Study also. Prerequisite: Math 112.

Concepts of mechanics: force systems in equilibrium, resultants, friction, centroids, utilization of vector algebra.

113. Engineering Measurements. (3:1:6) F, Sp Prerequisite: Math 111, MeEn 170 or equivalent.

Measurement of horizontal and vertical distances and angles to locate engineering projects including profiles, plane and topographical mapping, site layout, and earthwork.

199R. Cooperative Education. (1–3:Arr.:Arr. ea.) Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

200A,B. Introduction to Civil Engineering 2. (0.5:1:0 ea.) F, W

Activities of civil engineering; principles and methods involved in solving civil engineering problems. College Lecture attendance required.

203. Engineering Mechanics—Mechanics of Materials. (3:3:0) F, W; Sp even yr.; Su odd yr. Independent Study also. Prerequisite: Phscs 121 or CivE 103.

Fundamental concepts of elastic stress and strain relations; cylinders and spheres; torsion; beam theory, including bending stresses; deflections; and two-dimensional elastic theory.

204. Engineering Mechanics—Dynamics. (3:3:0) F, W; Sp odd yr.; Su even yr. Independent Study also. Prerequisite: CivE 103 or Phscs 121.

Concepts of dynamics applied to particles, systems of particles, rigid bodies, vibration systems, and nonrigid particles systems.

205. Structural Engineering Materials. (3:2:3) F, W; Sp odd yr.; Su even yr. Prerequisite: CivE 203 or concurrent registration.

Characterization of structural engineering materials, emphasizing laboratory testing.

270. Computational Methods. (3:3:0) F, Sp Prerequisite: Math 113 or concurrent registration.

Use of spread sheets, C-programming, and other computer tools for solution of civil engineering problems.

302. Structures and Strength of Materials Fundamentals. (4:4:0) F Prerequisite: Phscs 105, CivE 103.

Structural mechanics and strength of materials for soils, woods, concrete, and steel applied to practical construction situations. For nonmajors only.

321. Structural Analysis. (3:3:0) F; W even yr.; Sp odd yr. Independent Study also. Prerequisite: CivE 203, 270.

Loads on buildings and bridges; influence line diagrams; approximate analysis of frames; analysis of deflections; moment distribution for beams and frames; introduction to computer analysis of structures.

332. Hydraulics and Fluid Flow Theory. (3:3:0) F; Sp odd yr.; Su even yr. Independent Study also. Prerequisite: CivE 204, 270.

Fluid properties, fluid statics and dynamics, viscous flow, boundary layers, concepts of pipe and open-channel flow.

341. Elementary Soil Mechanics. (3:2:3) F, W Prerequisite: CivE 203, 332, Geol 330, or instructor's consent.

Soil-water systems as an engineering material. Use of idealized soil-water systems to obtain solutions to engineering problems.

351. Environmental Engineering. (3:3:0) W; Sp even yr. Prerequisite: Chem 106.

Environmental concerns, problems, and evaluation methodology; pollution control and engineering management approaches.

361. Highway Engineering. (3:2:3) F, Sp Prerequisite: CivE 113.

Highway planning, geometric design; traffic engineering; highway materials; rigid and flexible pavement design.

370. Civil Engineering Systems. (3:3:0) F, W Prerequisite: CivE 270.

System analysis and optimization including uncertainty and economic evaluation, with emphasis on civil engineering design procedure and applications.

391A,B. Civil Engineering Seminar. (0.5:1:0 ea.) F, W

Technical and professional activities in civil engineering. College Lecture attendance required.

423. Structural Steel Design. (3:3:0) W; Su even yr. Prerequisite: CivE 205, 321.

Elastic and plastic design concepts, stress analysis and design of beams, stiffened girders, and tension and compression members and their connections.

424. Reinforced Concrete Design. (3:3:0) F; Sp odd yr. Prerequisite: CivE 321.

Theory and design of reinforced concrete, including columns, beams, slabs, and footings; elastic and ultimate-strength methods of analysis.

431. Hydrology. (3:2:3) W; Su odd yr. Prerequisite: CivE 270, 332.

Waters of the earth, their occurrence, circulation, and distribution. Relationships between precipitation, evaporation, infiltration, transpiration, groundwater, and stream runoff.

433. Hydraulic Engineering. (3:3:0) F; Sp even yr. Prerequisite: CivE 332.

Application of fluid mechanics principles to analysis and design of hydraulic structures and systems.

491A,B. Civil Engineering Seminar. (0.5:1:0 ea.) F, W

Technical and professional activities in civil engineering. College Lecture attendance required.

493R. Civil Engineering Practicum. (1–18:Arr.:Arr. ea.) Prerequisite: instructor's consent.

495. Communication in Civil Engineering. (1:0:3) F, W Prerequisite: Engl 316.

Developing oral and writing skills related to civil engineering. Library research resulting in term paper and oral presentation required.

498R. Directed Studies in Civil Engineering. (1–18:Arr.:Arr. ea.) Prerequisite: instructor's consent.

Advanced Undergraduate or Graduate Courses

500. (CivE-MeEn) Design and Materials Applications. (3:3:0) W Prerequisite: CivE 203; MeEn 372 or CivE 321.

Applied and residual stress; materials selection; static, impact, and fatigue strength; fatigue damage; surface treatments; elastic deflection and stability—all as applied to mechanical design.

501. (CivE-MeEn) Stress Analysis and Design of Mechanical Structures. (3:3:0) Sp Prerequisite: CivE 321 or MeEn 372.

Stress analysis and deflection of structures; general bending and torsion with computer applications to mechanical and aerospace structure design.

502. (CivE-MeEn) Plasticity and Fracture Mechanics. (3:3:0) Su on dem. Prerequisite: MeEn-CivE 503.

Continuum theory of plasticity, linear elastic fracture mechanics, introduction to structured continuum theories for polycrystalline media.

503. (CivE-MeEn) Theory of Elasticity. (3:3:0) W on dem. Prerequisite: CivE 203, Math 321.

Tensor notation, stress and deformation tensors, constitutive equations, field equations; plane-stress/plane strain, axisymmetric, thermoelasticity, and large deformation problems.

504. (CivE-MeEn) Matrix Structural Analysis. (3:3:0) W Prerequisite: CivE 321 or MeEn 372.

Matrix notation, principle of virtual forces, flexibility method, principle of virtual displacements, stiffness method, general purpose computer programs for structural analysis.

505. Materials, Uses, and Properties of Concrete. (3:2:3) F Prerequisite: instructor's consent; CivE-MeEn 504.

Manufacturing and testing of cements; concrete materials and concrete mix design; techniques of concrete handling, placing, and treatment; laboratory work.

506. (CivE-MeEn) Introduction to the Finite Element Method. (3:3:0) F Prerequisite: CivE 321 or MeEn 372.

Finite element stress analysis; mathematical foundations; simplex, isoparametric, bending, and axisymmetric elements; basic 2-D and 3-D modeling techniques; use of FEA computer software and hardware.

507. (CivE-MeEn) Advanced Finite Element Analysis. (3:3:0) W Prerequisite: CivE-MeEn 506.

Complex 3-D finite modeling, multiple element types, mesh generation techniques. Application to thermal stress, nonlinear materials, large deformations. Use of CAE software.

508. (CivE-MeEn) Dynamics of Structures and Mechanical Systems. (3:3:0) F even yr. Prerequisite: Math 321 and CivE 321 or MeEn 372; CivE-MeEn 504.

Dynamic analysis of single and multi-degree-of-freedom systems, Ritz approximation, frequency domain analysis, geometric nonlinearity, material nonlinearity.

509. (CivE-MeEn) Spectral Analysis of Dynamic Systems. (3:3:0) W Prerequisite: Math 321, CivE 204.

Vibrations of elastic bodies and of systems with multiple degrees of freedom; random vibration. Computer-aided vibration testing and analysis.

513. (CivE-Geog) Photogrammetry and Remote Sensing. (3:2:3) Sp Prerequisite: CivE 113.

Using data obtained from visible range (photographs) and broader ranges (radar, microwaves, infrared, remote, etc.) of the electromagnetic spectrum to solve engineering problems with mapping procedures; photo and electronia data interpretation.

524. Design of Bridge Structures. (3:2:3) Sp even yr. Prerequisite: CivE 341, 424, 504.

Design of bridge composite; continuous beam and girder bridges including piers, abutments, floor systems, and bearings; field trips to observe bridge construction and fabrication.

526. Prestressed Concrete. (3:3:0) W even yr. Prerequisite: CivE 424, 504.

Basic theory, methods of pre- and post-tensioning, and details of design and fabrication applications to continuous structures.

529. Timber Design. (3:3:0) Sp odd yr.; Su even yr. Prerequisite: CivE 321.

Timber species, composition, and grades; design of beams, straight and tapered glue-lam girders, columns, connections, trusses, shear walls, and structural systems.

531. Water Resources Engineering. (3:2:3) F even yr.; Sp odd yr. Prerequisite: CivE 431, 433.

Advanced hydrologic and hydraulic principles in planning and designing irrigation, drainage, flood control, and other water resource facilities.

535. Hydraulic Design of Channels and Control Structures. (3:2:3) W Prerequisite: CivE 431, 433.

Design of water conveyance channels and control structures, including siphons, chutes, weirs, flumes, dams, spillways, and outlet works.

542. Foundation Engineering. (3:3:0) W; Sp even yr. Prerequisite: CivE 341.

Integrating soil mechanics and structural design to elementary structures, including spread footings, combined footings, mat foundations, retaining walls, pile foundations, and caissons.

543. Earth- and Rock-Fill Structures. (3:3:0) W odd yr. Prerequisite: CivE 341 or equivalent.

Design and construction of earth- and rock-fill dams, including selecting dam sites and materials, and applying seepage and pore pressure studies, shearing strength data, stability analysis, and construction controls.

545. Geotechnical Analysis of Earthquake Phenomena. (3:3:0) F Prerequisite: CivE 321, 341.

Earthquake magnitude and intensity potential; design ground motions, elementary dynamics of structures; response spectra; building code provisions; liquefaction and ground failure.

550. Water Quality Management. (3:3:0) W Prerequisite: CivE 351.

Philosophies, objectives, and methods for water quality management, including impact of various uses on water quality and behavior of pollutants in receiving waters.

555. Sanitary Engineering Analysis. (3:1:6) F odd yr., Sp even yr. Prerequisite: CivE 351.

Techniques for chemical and biological analysis of major organic and inorganic constituents of water, sewage, and industrial wastes.

561. Geometric Design of Highways. (3:3:0) F Prerequisite: CivE 361.

Designing visual aspects of highways; highway classification, design controls and criteria, and design elements; vertical and horizontal alignment, cross sections, intersections, and interchanges; capacity analysis.

562. Characteristics and Operations of Traffic Engineering. (3:3:0) F Prerequisite: CivE 361 or equivalent.

Traffic flow theory operations and characteristics, including drivers, vehicles, parking facilities, at-grade intersections, channelization, traffic control devices, signals.

563. Pavement Design. (3:3:0) W even yr.; Sp odd yr. Prerequisite: CivE 361.

Properties and selection of pavement components including soils, stabilized soil, base, subbase, subgrade, and bituminous materials, along with design of rigid and flexible pavements.

565. Transportation in Urban Planning. (3:3:0) W Prerequisite: instructor's consent.

Street classification and function; design elements of streets, intersections, and access drives; transportation planning studies; land use transportation interrelationships and improvement alternatives.

570. (CivE-MeEn) Computer-aided Engineering Software Design. (3:3:0) F Prerequisite: Fortran or C or similar computer language background.

Programming techniques and structure for interactive engineering design software. Use of engineering library utility routines for computer graphics, data access, and user interface. Term project required.

571. (CivE-MeEn) Engineering Computer Graphics and Software Design. (3:3:0) W Prerequisite: Fortran or C or similar computer language background.

Application of modern computer graphics techniques to engineering problems; 2-D and 3-D transformations, perspective, hidden surface removal, lighting and shading. Graphics data structures, standards, device independency. Software design methodology. Term project required.

572. (CivE-MeEn) Computer-aided Geometric Design. (3:3:0) F Prerequisite: Fortran or C or similar computer language background.

Mathematical theory of free-form curves and surfaces and solid geometric modeling. Bezier and B-spline curve and surface theory, parametric and implicit forms, intersection algorithms, topics in computer algebra, free-form deformation. Several programming projects.

575. (CivE-MeEn) Optimization Techniques in Engineering. (3:3:0) W Prerequisite: Math 313 and Fortran or similar computer language.

Application of nonlinear and discrete optimization techniques to constrained engineering design. Theory and use of state-of-the-art computer routines.

580. Hazardous Waste Management and Control. (3:3:0) W Prerequisite: CivE 351 or instructor's consent.

Hazardous waste statutes and regulations; introduction to hazardous waste treatment, storage, disposal, and monitoring techniques.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

621. Design of Thin Shell Structures. (3:3:0)

625. Design of Multistory Structures. (3:2:3)

641. Advanced Soil Mechanics. (3:3:0)

644. Advanced Foundation Engineering. (3:3:0)

646. Flow of Fluids Through Porous Media. (3:3:0)

650. Water Treatment Facilities Design. (3:2:3)

651. Wastewater Treatment Facilities Design. (3:2:3)

654. Industrial Waste Treatment. (3:3:0)

662. Traffic Simulation and Analysis. (3:2:3)

691R. Civil Engineering Seminar. (0.5:1:0 ea.)

694R. Selected Problems in Civil Engineering. (1-3:Arr.:Arr. ea.)

698R. Master's Project. (1-6:Arr.:Arr. ea.)

699R. Master's Thesis. (1-9:Arr.:Arr. ea.)

794R. Selected Topics in Civil Engineering. (1-3:Arr.:Arr. ea.)

797R. Research for Doctoral Students. (1-9:Arr.:Arr. ea.)

799R. Doctoral Dissertation. (1-9:Arr.:Arr. ea.)

Electrical and Computer Engineering

David J. Comer, Chair (459 CB)

Professors

Bowman, Lawrence S. (1967) BS, MS, PhD, U. of Utah, 1957, 1961, 1964.

Chabries, Douglas M. (1978) BS, U. of Utah, 1966; MS, California Inst. of Technology, 1967; PhD, Brown U., 1970.

Christiansen, Richard W. (1978) BS, Rutgers U., 1961; MS, U. of New Mexico, 1966; PhD, U. of Utah, 1976.

Comer, David J. (1981) BSEE, San Jose State U., 1961; MSEE, U. of California, Berkeley, 1962; PhD, Washington State U., 1966.

Humpherys, Deverl S. (1964) BS, Brigham Young U., 1955; MS, U. of Utah, 1957; PhD, U. of Illinois, 1963.

Miner, Gayle F. (1960) BS, MS, U. of Utah, 1959, 1960; PhD, U. of California, Berkeley, 1969.

Woodbury, Richard C. (1959) BS, U. of Utah, 1956; MS, PhD, Stanford U., 1958, 1965.

Associate Professors

Bearson, Leroy W. (1972) BS, U. of Utah, 1961; MS, Syracuse U., 1965; PhD, Auburn U., 1970.

Nelson, Brent E. (1984) BS, MS, PhD, U. of Utah, 1981, 1983, 1984.

Stirling, Wynn C. (1984) BS, MS, U. of Utah, 1969, 1971; PhD, Stanford U., 1983.

Ward, David M. (1964) BS, Stanford U., 1959.

Ware, Gene A. (1987) BS, MS, Brigham Young U., 1965, 1966; PhD, Utah State U., 1980.

Assistant Professors

Archibald, James K. (1987) BS, Brigham Young U., 1981; MS, PhD, U. of Washington, 1983, 1987.

Arnold, David V. (1992) BS, MS, Brigham Young U., 1983, 1987; PhD, Massachusetts Institute of Technology, 1992.

Frost, Richard L. (1987) BS, MS, PhD, U. of Utah, 1975, 1977, 1979.

Hutchings, Brad (1992) BS, MS, PhD, U. of Utah, 1984, 1987, 1992.

Jeffs, Brian D. (1990) BS, MS, Brigham Young U., 1978, 1982; PhD, U. of Southern California, 1989.

Long, David G. (1990) BS, MS, Brigham Young U., 1982, 1983; PhD, U. of Southern California, 1989.

Rice, Michael D. (1991) BS, Louisiana Tech U., 1987; MS, PhD, Georgia Inst. of Technology, 1989, 1991.

Salmon, Linton G. (1990) BS, Stanford U., 1977; MS, PhD, Cornell U., 1979, 1983.

Selfridge, Richard H. (1987) BS, California State U., Sacramento, 1978; MS, PhD, U. of California, Davis, 1980, 1984.

Swindlehurst, A. Lee (1990) BS, MS, Brigham Young U., 1985, 1986; PhD, Stanford U., 1990.

Adjunct Faculty

Baker, Doran J., BS, PhD, U. of Utah, 1953, 1956.

Emeriti

Berrett, Paul O. (1964) BS, U. of Utah, 1953; MS, U. of Southern California, 1955; PhD, U. of Utah, 1965.

Chaston, A. Norton (1957) AS, U. of Idaho, 1944; BS, U. of Utah, 1951; MS, Brigham Young U., 1963.

Clegg, John C. (1961) BS, MS, PhD, U. of Utah, 1949, 1954, 1957.

Jonsson, Jens J. (1953) BS, BS, U. of Utah, 1944, 1947; MS, PhD, Purdue U., 1948, 1951.

Losee, Ferrel A. (1965) BS, U. of Utah, 1953; MS, U. of Southern California, 1957.

Tony R. Martinez of the Computer Science Department is assisting with electrical and computer engineering courses and graduate programs by approval of the Electrical and Computer Engineering Department.

Programs and Degrees

BS Electrical Engineering

Emphases:

Computer
Electronics

BS Honors in Electrical Engineering and University Honors

Emphases:

Computer
Electronics

MS Electrical Engineering

PhD Engineering

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Undergraduate Program

The BS curriculum of both emphases in electrical engineering is fully accredited by the Engineering Accreditation Commission of the Accredited Board for Engineering and Technology, Inc. (ABET). Graduates are educationally prepared to become licensed professional engineers.

Electrical and computer engineering at BYU includes such areas as electronics engineering, communications engineering, digital logic systems, computer architectures, and VLSI design and engineering. Seminar work and participation in technical meetings sponsored by the engineering student organization provide a rich beginning to a professional career.

Undergraduate course work is based on a scientific foundation provided by in-depth study of mathematics, physics, and chemistry. Through this scientific foundation and a wide scope of engineering and computer courses and laboratories, graduates are equipped with knowledge and problem-solving techniques to assure both current competence and preparation for future developments. Those completing the undergraduate program may go on to industrial work in design, production, research, management, and related areas or

to graduate academic work, if graduate school requirements are met.

Preprofessional Program

All students who declare electrical and computer engineering as a major will be designated preprofessional until an application for acceptance to the professional program (available at the college advisement center, 264 CB) has been considered and approved by the department professional admissions committee. Preprofessional students are not allowed to enroll in electrical and computer engineering technical courses numbered 300 or above.

I. Professional program acceptance requirements: All applicants, continuing and transfer, applying for acceptance to the professional program in electrical and computer engineering must have completed the following minimum requirements:

- A. At least 30 semester hours of graded university-level education, including the courses listed below in item B, with a cumulative GPA of 2.0 or better.
- B. The following courses or their equivalent with a grade of C- or better in each:
 1. Math 112, 113.
 2. Phscs 121, 122.
 3. At least 3 additional semester hours of graded required technical course work at the 100 or 200 level.
- C. Completed transfer equivalency forms for all transfer technical courses.
- D. An application for acceptance to a departmental professional program.

Decisions on acceptance to the professional program will be based primarily on a weighted GPA of every technical course the applicant has completed or is enrolled in at the time the application is considered. The number of students accepted each year will be determined by available space and resources. A technical GPA of 3.0 will insure acceptance. It is recommended that students contemplating missionary service or other interruption of university work apply for professional acceptance after they return to regular attendance.

II. Professional program application procedure: Application for acceptance to professional status may be made whenever the above requirements have been completed. Application forms are available in the college advisement center (264 CB). In the event that the applicant is enrolled in one or more of the required courses when the application is considered, provisional acceptance may result. Application deadlines are June 1 for fall semester, October 1 for winter semester, and February 1 for spring term. A successful applicant must attend ECEn 312 the first semester or term in the professional program. If the application is denied or if a student accepted to the professional program does

not successfully complete ECEn 312 in the semester or term of acceptance, a new application may be filed for later consideration. Applicants who have previously completed ECEn 312 or its equivalent will be considered on an individual basis. Transfer students must be admitted to the university before an application to the professional program can be considered.

III. Academic standards and continuance: Proficiency in electrical and computer engineering requires dedication and certain natural abilities. It is the expectation of the department that all students accepted to the professional program have already demonstrated these qualities and will possess the abilities to successfully complete the program. Progress will be measured against professional standards.

Demonstrated integrity and a willingness to honor the highest professional standards of the engineering profession are expected.

From all technical classes being taken at the time of acceptance and after acceptance to the professional program, the student is permitted one class with an original substandard grade. If the grade is at least a D- and the course is not prerequisite to a required course, credit will be given for graduation.

Should a second original substandard grade be received, the student is automatically on probational status. A reasonable effort will be made to notify the student by letter that he or she is on probation. However, in the event this or some other means of communication is not successful, the student is still held responsible for the probationary status.

On receiving a third original substandard grade, the student will be suspended from the department. An "original substandard grade" is defined as an E, UW, D, or unconverted I grade that was the first received in a given course whether or not the course is later repeated and a higher grade received. Appeals will be considered by a departmental committee.

IV. Departmental class repeat policy: An ECEn class for which the original grade received is C- or higher may not be repeated. Also, a class may only be repeated once. Sometime during the semester/term violators will be dropped from the class roll.

Computer Studies

Several departments within BYU offer computer-related studies, and nearly all departments make some use of computers. The Electrical and Computer Engineering Department is intended for those who are interested in applying engineering principles to computer system designs. The scope ranges from overall system or network organization to the details of logic and solid state electronic phenomena. In computer engineering students also receive a survey of computer software adequate to give proper

perspective to hardware design and organization.

In the electrical engineering emphases students also learn the use of electronic computers and the basic techniques of digital circuit design.

Consult the Computer Science or Electronics Engineering Technology sections of this catalog for a computer-oriented program emphasizing application to technology, utilization, or software.

Entrance Requirements

For university admission requirements and the particular requirements specified by the college, see both the Admissions and College of Engineering and Technology sections of this catalog.

The basic four-year bachelor's degree and five-year master's degree programs are designed to utilize only the fall and winter semesters. Students who desire to attend school during the spring and summer terms as well as the fall and winter semesters can use an accelerated schedule to complete the same bachelor's requirements in three years and the master's requirements in four.

Entering freshmen who need further preparation for calculus (Math 112) may very profitably pursue this preparation during the spring or summer terms before their first fall registration by completing Math 110 and 111.

Transfer Students

Each new transfer student's situation must be evaluated separately. Write or call Transfer Advisement, Electrical and Computer Engineering Department, 459 CB, 378-4012, for help.

New Freshman Registration

Because of the extensive prerequisite structure and varying student needs, students should individually develop a long-range schedule of courses as soon as possible. It is recommended that the student select no more than two classes that have laboratories the same semester. Decisions such as terms of attendance, option choice, and mission or service breaks should be at least tentatively made and planned into the schedule. Secure helpful scheduling guides from the department secretary in 459 CB. To avoid problems, review this schedule with a department advisor.

For most students first-semester registration falls into one of two categories, with mathematics background being the determining factor. Those whose ACT mathematics score is 25 or higher and who have taken a high school trigonometry class should enroll in Math 112. Those with ACT mathematics scores of 23 or 24 should register for Math 110 and 111 for 5 credit hours. Those with ACT mathematics scores lower than 23 should consult with an Electrical and Computer Engineering Department advisor and then a Mathematics Department advisor. We then recommend the following

first-semester sequence of courses as determined by preparation. General Education courses may be added to make a full load.

Beginning in Math 112	Hours
Math 112	4
Phscs 121	3
CS 142	2
ECEn 291R	0
RelA 121	2
General Education	4-7

Beginning in Prior Mathematics	Hours
Math 110, 111	5
Chem 105	4
ECEn 291R	0
RelA 121	2
General Education	4-7

Note that it is important to receive a thorough understanding of a given mathematics course before proceeding to the next one!

For answers to further questions, write to Freshman Advisement, Electrical and Computer Engineering Department, 459 CB.

Undergraduate Seminar Requirement

It is expected that electrical and computer engineering majors will enroll in the undergraduate seminar ECEn 291R each semester of their freshman and sophomore years. Juniors must enroll one semester in undergraduate seminar ECEn 391. Registration in ECEn 291R is required for any remaining semesters. The undergraduate seminar will meet regularly on the first and third Thursdays of each month at 11:00 a.m. Additional seminars may also be scheduled. Consult the bulletin board outside 459 CB for the speakers' schedule and meeting location. Seniors must enroll in ECEn 491 and 492A or C.

Student participation in the Institute of Electrical and Electronic Engineers (IEEE) activities is also required to attain and demonstrate professional competence.

General Education Requirements

Do not attempt to complete the General Education requirements early. The prerequisite structure in this major requires regular progress in the technical areas. Completion of the General Education requirements should similarly be distributed. This applies to all majors, including those who expect to interrupt their schooling for missionary work or military service.

Summaries of the General Education requirements for engineering students are available in the advisement center, 264 CB. Note that Engl 316 is a departmental as well as General Education requirement.

Program Requirements

BS Electrical Engineering

I. Required core courses: CS 142; Math 112, 113; 312, 313; or 343, 344, 434; Stat 321 or 421; Phscs 121, 122, 221; Chem 105; MeEn

321 or 401; Engl 316; ECEn 220, 222, 291R, 311, 312, 313, 315, 324, 343, 360, 391, 411, 491, 492A,B,C, and 25 hours of courses from an emphasis.

II. A mathematics minor requires the alternative classes Math 343, 344, 434. This sequence is also suggested if an advanced degree is planned.

III. Details of emphasis course work are contained in next section.

Note: An extremely high degree of prerequisite and corequisite structure exists among these courses. Additional prerequisites must be filled for courses within an emphasis. Because of the many variations in possible schedules and because not all classes are offered every term, students must carefully plan their progress to avoid taking additional time.

Computer and Electronics Emphases

These two emphases are offered as detailed below. Each emphasis requires introductory course work in an area of electrical and computer engineering. Other emphases satisfying a particular need may be submitted for prior approval by petition to the department standards committee.

Courses required for each of the two standard emphases follow:

Computer Emphasis: Students whose interests include digital computer design, architectures, switching theory, telecommunications, or the design of digital electronic circuitry, including VLSI, should choose the computer engineering emphasis. In addition to the core courses listed above, the following courses are required:

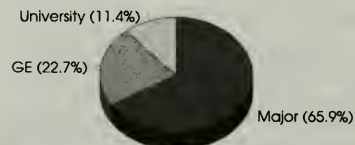
	Hours
CS 232, 344	6
ECEn 323, 423, 451	10
ECEn 327, 331, 442, or 460	3
Restricted technical electives	6
Total	25

Technical electives may be chosen from courses with computer involvement in electrical and computer engineering, mathematics, statistics, or computer science with prior approval of an advisor.

Electronics Emphasis: The electronics emphasis is designed for those whose interests include electronic circuits, instrumentation, radio or television communications, analog and digital signal processing, microwave systems, antennas, solid-state devices, and integrated circuit design. In addition to the core courses listed previously, the following courses are required:

	Hours
ECEn 352, 361, 442, 444, 450, 460, 461	15
ECEn 323, 327, or 331	3
Restricted technical electives	7
Total	25

Summary of Degree Requirements for BS Electrical Engineering



1. Total hours	136.5
2. Major hours *	90.0
3. General Education requirements	31.0
Core	12.0
First-Year Writing	3.0
Arts and Sciences electives	9.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	15.5
Religion	14.0
PE/Health	1.5
5. Elective hours	0.0
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.5
16 hours per semester	8.5
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BS with Honors in Electrical Engineering and University Honors

I. Honors Program requirements: Honors General Education requirements as listed in the Honors Education section of this catalog.

II. Honors electrical engineering requirements:

- Except for ECEn 492B,C, satisfy requirement for either emphasis of electrical engineering BS degree listed in this catalog.
- Complete Honors thesis by taking ECEn 499A,B. These replace ECEn 492B,C and 1.5 semester hours of technical electives. A thesis proposal must be approved by the sponsoring faculty member and Honors dean before research is begun.
- Substitute sections of RelC 491, 492 taught in College of Physical and Mathematical Sciences for 2 hours of university religion requirement.

Honors students are encouraged to take Honors Education sections of other required courses, such as Math 112H, Math 113H, and Engl 316H.

Course Sequences

Because student ability, workload, ROTC involvement, mathematics background, spring and summer term involvement, etc.,

vary so widely, it is impossible to give a four-year class sequence that would fit more than 1 or 2 percent of any class. Flowcharts and other advisement helps are, therefore, available at the Electrical and Computer Engineering Office (459 CB). From these a student may create a tailor-made class schedule.

Professional Registration

The Electrical and Computer Engineering Department provides the option for graduates to become registered professional engineers. General qualifications for becoming registered are explained in the College of Engineering and Technology section of this catalog. This status is vital to engineering practice in the public sector and to much consulting work. The basic electrical and computer engineering program outlined in this department prepares graduates to successfully complete the Fundamentals of Engineering (FE) examination. Students who wish to become registered as professional engineers are advised to discuss this matter with an advisor from the department soon after admission to the professional program. The advisor will suggest those courses that can be taken within the framework of the basic program to prepare for the initial examination.

Graduate Credit

Students may, subject to certain restraints, count up to 10 semester hours of graduate-level credit taken during the senior year at BYU toward a master's degree. Such credit cannot count doubly to satisfy both undergraduate and graduate degree requirements. In those situations when more than 10 semester hours of credit would prove advantageous, the student may consider the integrated master's program. Contact either the undergraduate or graduate coordinator for details.

Electrical and Computer Engineering (ECEn)

Undergraduate Courses

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

220. Digital State Machines. (4:3:3) F, W, Sp Prerequisite: Phscs 122 or concurrent registration.

Basic elements and technologies used to make digital logic circuits; laboratory experience in construction of synchronous and asynchronous state machines. Fee.

222. Numerical Solutions in Electrical Engineering. (3:3:0) F, W Prerequisite: CS 142, Math 113, Phscs 122.

Computer algorithms related to electrical engineering. Applications and design.

291R. Undergraduate Seminar. (0:1:0 ea.) F, W

Presentations by faculty, advisors, and industrial representatives. Required each semester for undergraduate majors not enrolled in ECEn 391, 491, or senior seminar and design project (ECEn 492A, C). College Lecture attendance required.

301R. Elements of Electrical Engineering. (1-3:3:0 ea.) F, W, Sp Prerequisite: Phscs 122, Math 313.

Linear electrical circuits, computer organization, and logic circuits for nonmajors.

311. Circuits Laboratory. (1:0:3) F, W, Sp, Su Prerequisite: ECEn 312 or concurrent registration.

Basic electrical instrumentation and measurements. Fee.

312. Circuit Analysis. (4:4:0) F, W, Sp Prerequisite: Phscs 122, Math 113, professional status.

Analysis of resistive circuits and RLC circuits in the sinusoidal-steady-state, resonance, Bode plots, and balanced three-phase circuits. To be taken semester of admittance to professional program.

313. Electronic Circuit Design 1. (4:3:3) F, W, Sp Prerequisite: ECEn 311, 312.

Analysis and design of linear and nonlinear electronic circuit building blocks.

315. Signals and Systems. (4:4:0) F, W, Su Prerequisite: ECEn 312, Math 313 or 434.

Time and frequency domain analysis of discrete or continuous systems subjected to periodic or nonperiodic input signals.

323. Introduction to Computer Design. (3:3:0) F, W Prerequisite: ECEn 220, 222.

Computer design and organization.

324. Microprocessor Applications. (3:2:3) F, W, Su Prerequisite: ECEn 220, 222, 312; or ECEn 301R, MeEn 273.

Basic microprocessor architecture. Memory expansion. Communication with external devices. A-D and D-A conversions. Design of simple noncomputing systems.

327. Computer Input/Output Devices. (3:3:0) F, W Prerequisite: ECEn 313, 324.

Input/output interfacing of peripheral devices. Dynamic memory control, disk and graphics controllers. Aperiodic selected laboratory assignments.

331. Introduction to Electrical Machinery. (3:2.5:1.5) F, W, Sp Prerequisite: ECEn 301R or 312.

Polyphase circuits, magnetic circuits, AC and DC machines, polyphase rectifiers and transformers.

343. Electronic Circuit Design 2. (4:3:3) F, W, Su Prerequisite: ECEn 313; Math 313 or 434.

Design of electronic circuits such as differential, multistage, power, feedback and high-frequency amplifiers, oscillators, modulators, and power supplies.

352. Experiments in Integrated Circuit Development. (1:0:3) F, W Prerequisite: Chem 105, ECEn 313.

Measurements of key silicon properties and fabrication of integrated circuits.

360. Transmission Lines and Introductory Fields. (4:4:0) F, W Prerequisite: Math 312 or 344, 313 or 434, ECEn 312.

Properties and application of transmission lines. Introduction to electric and magnetic field theory and development of Maxwell's equations.

361. Transmission Lines and Introductory Fields Laboratory. (1:0:3) F, W Prerequisite: ECEn 360 or concurrent registration.

Experiments and measurement techniques in static and time-varying fields. Transmission line design and measurements. Microwave generation, propagation, detection, and hardware components.

391. Junior Seminar. (0.5:1:0) F, W

Presentations by faculty, advisors, and industrial representatives. To be taken one semester as a junior. College Lecture attendance required.

411. Feedback Concepts. (3:3:0) F, W, Sp Prerequisite: ECEn 315.

Introduction to design and analysis of continuous systems controlled by feedback.

423. Computer Design and Architecture. (3:3:0) F, W Prerequisite: ECEn 323, 324, CS 232.

Organization, function, and design decisions in modern computer systems.

432. Introduction to Power System Analysis. (3:3:0) Prerequisite: ECEn 331.

Polyphase circuits, transmission line constants. Power course representation, symmetrical components, fault studies, and system stability.

442. Advanced Electronics. (3:2:3) F, W Prerequisite: ECEn 343.

Analysis and design of modern electronic circuits.

444. Analog and Digital Communication Theory. (3:3:0) F, W Prerequisite: ECEn 315; Stat 321 or 421.

Analysis and theory of communication systems, emphasizing modulation schemes and applications; information theory; introduction to nondeterministic random signals and processes in the presence of noise.

450. Introduction to Semiconductor Devices. (3:3:0) W Prerequisite: ECEn 313.

Physics of electronic and optical solid state devices; includes semiconductor materials, bipolar and FET device physics and modeling, optical properties of semiconductors, and lasers.

451. Introduction to Digital VLSI Circuits. (4:3:3) F, Sp Prerequisite: ECEn 313, 324.

Design of very large-scale integrated circuits for digital systems. CAD tools used extensively to simulate the design and create and verify mask circuits.

460. Applied Electromagnetic Theory. (3:3:0) F, Sp Prerequisite: ECEn 360.

Application of Maxwell's equations to propagating and radiating components and systems.

461. Electromagnetics Laboratory. (1:0:3) F, Sp Prerequisite: ECEn 361; 460 or concurrent registration.

Design and evaluation of microwave devices, systems, and materials.

491. Senior Seminar. (0.5:2:0) F Prerequisite: senior electrical and computer engineering standing.

Department seminars and College Lecture attendance required.

492A. Senior Seminar and Design Project Proposal. (0.5:1:0) F, W Prerequisite: senior electrical and computer engineering standing; Eng1316 or concurrent registration.

Senior seminar and proposal for senior capstone design project. College Lecture attendance required.

492B. Senior Design Project. (1:0:Arr.) F, W, Sp Prerequisite: ECEn 492A.

Senior design project implementation.

492C. Senior Seminar and Design Project Report. (0.5:0:Arr.) F, W, Sp Prerequisite: ECEn 492B or concurrent registration.

Report and presentation of senior design project. College Lecture attendance required.

493R. Special Topics in Electrical and Computer Engineering. (1-4:Arr.:Arr. ea.)

Topics vary. Recent developments in electrical and computer engineering.

499A. Honors Thesis Project. (2:0:Arr.) F, W, Sp Prerequisite: ECEn 492A.

Honors senior design project implementation.

499B. Honors Thesis Report. (1:0:Arr.) F, W, Sp Prerequisite: ECEn 499A or concurrent registration.

Report and presentation of Honors senior design project.

Advanced Undergraduate or Graduate Courses

510. (ECEn-Stat 545) Stochastic Processes. (3:3:0) Prerequisite: Stat 421 or 520.

Review of elementary probability: expectation, characteristic functions, limit theorems. Introductory random processes: definitions and properties, covariance and spectral density, time average, stationarity, ergodicity, linear system relations, mean square estimation, Markov processes.

511. Introduction to Linear System Theory. (3:3:0) F Prerequisite: ECEn 411.

Finite-dimensional linear systems. State variable realizations, canonical forms, controllability, observability, minimality. Time and frequency domain design of controllers and observers.

512. Active and Passive Filter Design. (3:3:0) Prerequisite: ECEn 314 or 315.

Design and frequency response characteristics of active and passive filters; emphasizes applications to signal processing.

513. Signal Analysis in Linear Systems. (3:3:0) F Prerequisite: ECEn 315 or graduate standing.

Continuous and discrete signals in linear systems, using Laplace, Fourier, and Z-transforms. Sampling, simulation, analog and discrete filters, FFT, windowing, and signal reconstruction.

514. Digital Signal Processing Laboratory 1. (1:0:3) F Prerequisite: ECEn 513 or concurrent registration.

Testing signal processing algorithms and concepts using digital computer. Discrete convolution, DFT, and digital filters.

515. Data Acquisition Systems. (3:3:0) Sp Prerequisite: ECEn 313; 314 or 315.

Components and their characteristics required to convert physical variables to digital data. Relationship between digital data word bit size and component characteristics.

516. Adaptive Processing. (2:2:0) Sp Prerequisite: ECEn 513.

Adaptive digital filter theory, LMS adaptive algorithms, applications to learning filters, noise cancellation, and adaptive antenna arrays.

517. Digital Filters and Signal Processing. (3:3:0) W Prerequisite: Math 322 or 332; ECEn 315 or 513; concurrent registration in ECEn 510.

Digital filters and their application to signal processing.

518. Digital Signal Processing Laboratory 2. (1:0:1) W Prerequisite: ECEn 517 or concurrent registration.

Advanced laboratory experience in computer processing of digital signals and signals in discrete format.

519. Digital Image Processing. (3:3:0) Sp Prerequisite: ECEn 315 or 513; 510.

Digital processing techniques for two-dimensional scene analysis, classification feature enhancement, contrast enhancement deblurring, data compression, etc.

520. Error-correcting Codes. (3:3:0) F Prerequisite: ECEn 324.

Methods, costs, and payoffs of various codes for correcting errors in digital systems.

521. Theoretical Foundations of Computing. (3:3:0) F Prerequisite: CS 232, 344, and computer programming ability.

Introduction to finite automata, formal grammars, Turing machines, algorithm analysis and computational complexity.

522R. Special Topics in Computer Systems. (1-3:Arr.:Arr. ea.) Prerequisite: instructor's consent.

523. Computer Network Queueing. (3:3:0) W Prerequisite: ECEn 513 or concurrent registration; Stat 321 or 421.

Queueing concepts related to computer systems and networks, resource allocation, speed, service time. Applications of random variables and probability theory.

526. Local Computer Networks. (3:3:0) Prerequisite: ECEn 327.

Local computer network coupling fundamentals.

528. Computer Systems Architecture. (3:3:0) Prerequisite: ECEn 423.

Advanced topics in computer architecture and parallel processing.

529R. Advanced Computer System Design Lab. (3:3:0 ea.) Prerequisite: ECEn 423, 451.

Lab experience in design and analysis of advanced computer systems.

542R. Special Topics in Electronics. (1-3:Arr.:Arr. ea.) Prerequisite: instructor's consent.

544. Digital Communication Theory. (3:3:0) F Prerequisite: ECEn 444, 510.

Theory and design of optimal digital communication systems with noise, matched filters, correlation detectors, convolution codes, sequential coding/decoding schemes, block coding, and spread spectrum.

545. Information and Coding Theory. (3:3:0) W Prerequisite: ECEn 314 or 315; 510; Stat 421.

Mathematical development of information and coding theory applied to communication and other stochastic processes.

546. Optical Communication Components and Systems. (3:3:0) W Prerequisite: ECEn 460.

Fiber optic communication system components and their operating and performance characteristics.

547. Satellite Communications Systems. (3:3:0) Prerequisite: ECEn 444.

Satellite communication system design including satellite transponders, microwave components, earth station hardware, link budgets, and analog and digital modulation formats.

550. Device Electronics for Integrated Circuits. (4:3:3) F Prerequisite: ECEn 450.

Semiconductor device analysis and simulation. Analog-integrated circuit design.

551. VLSI Systems Design. (3:3:0) W
Prerequisite: ECEn 451.

Design of structured circuit systems for very large-scale integrated semiconductor chips. Architecture of digital VLSI systems.

553. VLSI Process Technology. (3:3:0)
Prerequisite: senior or graduate standing in engineering or physical sciences.

Physical and chemical process steps used in fabricating very large-scale integrated circuits on monolithic silicon crystal.

555. VLSI Testing. (1:1:3) Prerequisite: ECEn 451.

Testing of ICs designed previous semester in ECEn 451. Topics in VLSI-testable circuit designs.

560. Intermediate Electromagnetic Theory. (3:3:0) Even yr. Prerequisite: ECEn 460. Recommended: Math 323.

Application of electromagnetic theory to nonlinear and anisotropic materials and devices. Current mathematical techniques in field theory.

561. High-Frequency Communication Circuits. (4:4:3) F Prerequisite: ECEn 360, 442.

Circuits and RF techniques used in communication systems.

563. Antenna Theory. (3:3:0) Alt. even yr. Prerequisite: ECEn 460.

Radiation, terminal, and distributed properties of antenna structures. Effects of lossy and ionized media on antenna performance. Noise temperature.

564. Radar Systems Performance. (3:3:0) Prerequisite: ECEn 444, 460.

Performance and evaluation of various radar systems. Range equation, signal detection, ambiguity function, system configurations, and components.

568. Microwave Remote Sensing. (3:3:0)

Emphasis on space-borne remote sensing of the earth's atmosphere, land, and oceans. Primary methods and applications for both active (Roden) and passive (radiometry) are covered.

593R. Special Topics in Electrical Engineering. (3:3:0 ea.) Prerequisite: instructor's consent.

Topics vary. Recent developments in electrical engineering.

598R. Special Problems. (1-3:Arr.:Arr. ea.) Prerequisite: instructor's consent.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

611. Optimal Control. (3:3:0)

612. System Identification. (3:3:0)

617. Advanced Digital Signal Processing. (3:3:0)

619. Advanced Image Processing. (3:3:0)

644. Pattern Recognition. (3:3:0)

646. Optimal Estimation Theory. (3:3:0)

661. Advanced Electromagnetic Fields. (3:3:0)

691R. Graduate Seminar. (0.5:1:0 ea.)

699R. Master's Thesis. (1-9:Arr.:Arr. ea.)

791R. Seminar for Doctoral Students. (0.5:0.5:0 ea.)

794R. Selected Topics in Electrical and Computer Engineering. (1-3:Arr.:Arr. ea.)

797R. Research for Doctoral Students. (1-9:Arr.:Arr. ea.)

799R. Doctoral Dissertation. (1-9:Arr.:Arr. ea.)

Engineering and Technology Education

L. Douglas Smoot, Coordinator (270 CB)

Engineering and Technology Education Courses (EngT)

100. Introduction to Engineering and Technology. (1-3:Arr.:Arr.) Su

Surveys of engineering and technology fields. Emphasis on communicative, mathematics, and computer technology skills. Laboratory exercises, field trips, design contests.

200. Technology and Society. (3:3:0) F, W

Interaction between society and technology. Historical developments and contemporary writings surveyed to better understand our technologically dependent modern society.

500. Technical Management Seminar. (1:1:0) F

Opportunities and challenges in technical management. Interaction with engineering managers in dealing with technically trained employees.

501. Management Simulation. (1:0:3) W

Use of Aerospace Environment Business Simulator (computer program) to provide time-compressed experiences in managing a company involved in research, development, and manufacturing.

502. Systems Engineering. (3:3:0)

Applying quantitative techniques to the solution of interrelated problems, optimizing the system's overall operation.

Manufacturing Engineering and Engineering Technology

A. Brent Strong, Chair (435 CTB)

Professors

Adams, Brent L. (1992) BS, U. of Utah, 1974; MS, PhD, The Ohio State U., 1976, 1979.
Allen, Dell K. (1960) BS, Utah State U., 1954; MS, Brigham Young U., 1966; EdD, Utah State U., 1973.
Strong, A. Brent (1986) BA, PhD, U. of Utah, 1967, 1971.

Associate Professors

Holt, Ivin L. (1963) BS, Brigham Young U., 1957; MEd, Pennsylvania State U., 1958; EdD, Arizona State U., 1972.
Johnson, A. Kent (1991) BSEE, Brigham Young U., 1960; MSEE, New York U., 1962; DSc, Steven Inst. of Technology, 1965.
Kunzler, John J., Jr. (1971) BS, Utah State U., 1963; MS, Brigham Young U., 1980.
Red, W. Edward (1983) BA, BSME, Rice U., 1965; PhD, Arizona State U., 1972.
Rotz, Christopher A. (1985) BS, MS, PhD, Massachusetts Inst. of Technology, 1973, 1976, 1978.
Smart, Merrill J. (1967) BS, Brigham Young U., 1959; MS, U. of Utah, 1962.
Todd, Robert (1989) BS, California State U., Northridge, 1964; MS, PhD, Stanford U., 1965, 1971.
Tolman, Wilford J. (1960) BS, MS, Brigham Young U., 1960, 1964.

Assistant Professors

Carter, Perry W., II (1980) BS, MS, Brigham Young U., 1973, 1974; PhD, U. of Massachusetts, 1988.
Harrell, Charles R. (1982) BS, Brigham Young U., 1976; MS, U. of Utah, 1982; PhD, U. of Denmark, 1988.
Hawks, Val D. (1985) BS, Brigham Young U., 1980; MS, Lehigh U., 1986.
Helps, C. Richard (1986) BSc (Eng.), MSc (Eng.), Witwatersrand, South Africa, 1978, 1986.
Kohkonen, Kent E. (1970) BS, MS, Brigham Young U., 1968, 1976.
Mather, C. Glayd (1974) BS, MS, Utah State U., 1964, 1965.
Owen, Earl F. (1982) BS, MS, U. of Utah, 1970, 1972.
Sorensen, Carl D. (1987) BS, Brigham Young U., 1981; PhD, Massachusetts Inst. of Technology, 1985.
Whited, Charles Robert (1969) BS, MS, U. of Utah, 1956, 1957.

Programs and Degrees

BS	Electronics Engineering Technology
BS	Manufacturing Engineering
BS	Manufacturing Engineering Technology
MS	Manufacturing Engineering
MS	Computer-integrated Manufacturing

MEM Master of Engineering Management
MTM Master of Technology Management

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Professional Bachelor's Degree Programs

All students are urged to declare their intended major upon first entry to the university. Students having questions regarding the majors offered in the Manufacturing Engineering and Engineering Technology Department are invited to visit the college advisement center (264 CB) or the department office (435 CTB) to talk with an advisor.

Any student may declare any of the departmental majors in a preprofessional status. To continue into the professional program, however, students must complete a specified set of preprofessional requirements and then be accepted formally to professional status.

I. Minimum application requirements: Application by continuing or transfer students may be made after successful completion of the following courses or their equivalent:

- A. 30 semester hours of graded, university-level credit.
- B. Courses specified by major:
 1. Electronics engineering technology: Math 110, 111, 112, 113, Phscs 121, CS 130, EET 103, 131, 228, 232, 236, 245.
 2. Manufacturing engineering: Math 112, 113, Phscs 122, Chem 105, CivE 103.
 3. Manufacturing engineering technology: Math 110, 111, 112, Phscs 121, Chem 105, MeEn 171, MET 131, 230.

A minimum grade of C– must be achieved in each course taken in items A and B above, together with a cumulative university GPA of 2.0 or higher. In addition, preprofessional students must enroll in and pass their major's seminar course, 291R, each semester in residence. The application for acceptance to the professional program should be made as soon as possible after the above requirements have been met. Preprofessional students may not take any courses in their major numbered 300 or above. Lack of continuous enrollment during any fall or winter semester will require reapplication to the professional program.

The exact number of students accepted each year into each major will be determined by the available space and resources. Acceptance to the professional program will be based primarily on the GPA earned in the preprofessional course work. In exceptional cases the department may consider other factors and an interview may be required.

II. Application procedure: Application for acceptance may be made at any time after the preprofessional requirements are completed. The deadlines for application are June 1 for fall semester, October 1 for winter semester, and February 1 for spring term. Transfer students may be considered at other times provided they have been admitted to the university. Application forms are available in the college advisement center (264 CB).

III. Academic standards and continuance: On gaining acceptance to the professional program, students must maintain the following minimum academic standards. Failure to do so may result in being terminated from the program.

- A. Maintain a minimum university cumulative GPA of 2.0.
- B. Accumulate no more than 6 semester hours of grades below C– in professional program courses as listed below.
- C. Professional program courses may be retaken only one time to improve a grade.

All potential termination situations will be reviewed by a faculty committee, which will recommend action to be taken.

General Education

To best integrate General Education requirements with major requirements students should obtain a complete program outline for their major area from the Manufacturing Engineering and Engineering Technology Department (435 CTB) as well as the latest General Education information and assistance from the college advisement center (264 CB) and the GE Guide.

Financial Support Opportunities

In addition to general university scholarships and student employment, the Manufacturing Engineering and Engineering Technology Department offers department scholarships, a cooperative education program with industry, and a variety of departmental part-time jobs such as lab assistant, paper grader, electronics technician, maintenance assistant, computer operator, etc.

Cooperative Education

Industrial experience in the major before graduation is strongly encouraged. Qualified students may enroll in 199R (cooperative education) and receive 0–3 hours of credit for each semester. The co-op program must be approved before the actual experience. A formal report and employer evaluation are required. A maximum of 3 credit hours may be applied as elective credit toward graduation.

Transfer Credit

When transferring into the department, students should meet with an assigned advisor before registering for classes to

evaluate their technical courses and to get help in planning their schedule for completion of remaining course work.

Graduate Study

Opportunity for education beyond the bachelor's degree is offered through (1) the master of science degree in manufacturing engineering, (2) the master of science degree in computer-integrated manufacturing, (3) the master of science degree in the Technology Education and Construction Management Department for those who wish to go into postsecondary education, (4) an MBA degree offered through the Marriott School of Management (check for MBA entrance requirements), and (5) a master of technology management degree and master of engineering management degree offered jointly with the Marriott School of Management. See the 1993–94 BYU Graduate Studies Catalog for details.

Extracurricular Activities

Students may join student chapters of national professional organizations affiliated with their major area of study. Student interaction, leadership, and career awareness are important to engineering and technology studies. All majors are encouraged to become members and actively participate not only in these chapters, but also to support field trips, guest speakers, banquets, and department activities.

Undergraduate Seminar

Each student is required to enroll in 291R while in the preprofessional program. During the professional program, each student must enroll in three semesters of 391R and one semester of 491R. Enrollment in 491R is usually during the next-to-last semester.

Design Engineering Technology

Since September 1, 1989, no new students have been accepted into the Design Engineering Technology Program. Students who wish to major in design engineering/CAD should contact the Department of Mechanical Engineering.

Electronics Engineering Technology

C. Richard Helps, Program Coordinator (435 CTB)

BS Electronics Engineering Technology

This engineering technology program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (TAC/ABET).

I. Career opportunities: Students in electronics engineering technology are generally interested in applying

engineering principles and supervising people for work in the areas of design, development, production, construction, operations, sales, and management. The program provides training at the professional (four-year) level in communications, digital electronics, circuit analysis, instrumentation, real-time programming, and computer-aided process control and testing. This is accomplished through the use of the excellent departmental facilities, which include some of the latest electronic equipment, computer facilities (a real-time computer laboratory and local area network system), and communications equipment.

Graduates of this program are working in a wide variety of industries, including computers, communications, integrated circuits, storage and retrieval, instrumentation and testing, automation, medicine, and service. Graduates are responsible members of the technical team at the professional level, where electronics is developed, manufactured, applied, and maintained to meet the needs of people.

II. Technical electives: All students receive primary training as electronics engineering technologists. The purpose of the 12 hours of technical electives is to allow students to gain additional strength in the areas they are particularly interested in. This may include computers, communications, electronic manufacturing, technical management/sales, and technical writing. These electives are selected with the help of an advisor. A proposal letter is submitted to the department for approval before taking the courses, a majority of which must be upper division.

III. High school preparation: Recommended high school courses include algebra, trigonometry, physics, typing, and electronics. Course work in electricity, drafting, chemistry, and shop is recommended. Students who lack any of this preparation, however, should make an appointment with an advisor and plan the program needed.

IV. Transfer students from electronics technician programs: This four-year degree is designed with a "2+2" structure. This means that students who complete a TAC/ABET-accredited, two-year electronics technician program and then transfer to BYU can complete the last two years with minimum interruption.

- A. Required courses: Math 110, 111, 112, 113, Phcs 121, 221, CS 130, Comms 150, Econ 110, Engl 316, EET 103, 131, 228, 232, 236, 245, 291R, 322, 340, 341, 342, 343, 345, 391R, 421, 441, 443, 447.
- B. 12 hours of technical elective courses.

V. Equipment: Each student is required to obtain the following:

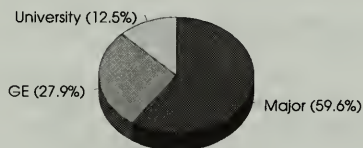
- A. Electronics tool kit.
- B. Components kit for designated classes.

- C. Wire wrap board/single board computer kit for designated classes.
- D. Scientific calculator.
- E. Supply of appropriate computer storage media.

Note: Students should contact an electronics engineering technology advisor before making any purchases.

VI. Scholarships: Each student should apply at the Financial Aid Office (A-41 ASB) for general university scholarships and awards. The Fritz B. Burns Scholarship is established for students in the Electronics Engineering Technology Program. To be considered for these awards, based on academic merit and financial need, students must be admitted to BYU, declare electronics engineering technology as their major, be enrolled full-time, register for the correct Electronics Engineering Technology Program classes, and complete the scholarship application available at the Department Office (435 CTB).

Summary of Degree Requirements for BS Electronics Engineering Technology



1. Total hours	132.5
2. Major hours*	79.0
3. General Education requirements	37.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

***Note:** Hours do not include any course that could be used to fill GE or university requirements.

Electronics Engineering Technology (EET)

Undergraduate Courses

Note: For 500-level and above electronics engineering technology courses, see the department office (435 CTB).

103. AC/DC Circuits. (4:3:3) F, W
Prerequisite: prior or concurrent registration in Math 112.

Basic AC/DC analysis, including Ohm's Law, loop and nodal analysis, capacitance, inductance, the sine wave, impedance, reactance, resonance, network theorems, and transformers. Fee.

131. Active Devices and Circuits. (4:3:3) F, W
Prerequisite: prior or concurrent registration in EET 103.

Transistor principles, including semiconductor theory, bipolar and field-effect device characteristics and parameters, basic circuit configurations, device biasing, and frequency response. Fee.

198R. Directed Studies in Electronics Engineering Technology. (2:2:2 ea.) F

Introduction to electronics engineering technology. Special topics in problem solving and technology careers.

199R. Cooperative Education: Electronics Engineering Technology. (1-3:Arr.:0 ea.) F, W, Sp, Su
Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

228. Electronic Manufacturing Processes. (3:2:3) F, Sp
Prerequisite: EET 131.

Individualized design and production of an electronic prototype and its technical manual. Includes computer-aided production drawings, trouble shooting, breadboard work, and printed circuit fabrication. Fee.

232. Multistage Active Circuits. (4:3:3) F, Sp
Prerequisite: EET 131.

Application of active discrete BJT and FET devices and integrated circuits in audio, wideband, and power amplifiers; oscillators and power supplies.

236. Digital Circuits. (3:2:3) F, W
Prerequisite: CS 142, EET 232.

Logic circuits and families, documentation and terminology, combinational and sequential circuit analysis and design. Fee.

245. Communication Circuits. (3:2:3) W
Prerequisite: EET 232.

Information transmission: basic theory and applications, transmitters, transmission lines and receivers, audio and radio frequencies, amplitude and frequency modulation and demodulation; circuits and techniques.

291R. Undergraduate Seminar. (0:1:0 ea.) F, W, Sp

Required of all freshman and sophomore electronics engineering technology students each semester. College Lecture and Technology Department Lecture attendance required.

314. Industrial Electronics. (3:2:2) F, Sp
Prerequisite: Math 112, Phscs 122, CS 131.

For non-electronics engineering technology majors. Introduction to industrial electrical and electronic devices and circuits. Control system applications. Technical reporting of lab data and industrial applications. Operation of common lab equipment.

322. Linear Integrated Circuits. (3:2:3) F, W
Prerequisite: EET 245.

Linear integrated circuits, device characteristics and applications; amplifiers, regulators, generators, modulators, active filters, and detectors; operational and instrumentation amplifiers, regulator, phase-locked loop, multiplier, and multiplexer. Fee.

334. Electrical Troubleshooting. (3:2:3) F alt. yr. Prerequisite: EET 245.

Maintenance and service of electronic equipment; trouble-shooting techniques; using electrical measuring and testing devices.

340. Process Control Programming. (3:2:2) F, W
Prerequisite: EET 236, CS 130.

Interactive computing, using assembly language on microcomputers.

341. Process Control Applications. (3:2:2) W, Sp
Prerequisite: EET 342, Eng1 316.

Instruction sets, assembly languages, and system programming features of small, general-purpose computers used in industrial process control environments.

342. System Controllers. (3:2:3) F, W
Prerequisite: EET 236; 340 or concurrent registration.

State machine and system controller design, registers, memories, microprocessors, and microcomputers. Fee.

343. Computer Interfacing. (3:2:3) W, Sp
Prerequisite: EET 322, 340, 342.

Microcomputer applications, digital system interface design, parallel and serial interfacing, A/D and D/A converters. Fee.

345. RF/Microwave Systems. (3:2:3) W, Su
EET 228, 245, Eng1 316.

Systems principles: multistage analysis and testing techniques, RF, microwave, and antennas. Student projects. Fee.

346. Audio and Video Systems. (3:2:3) F alt. yr. Prerequisite: EET 245.

Audio and video components, circuits, and systems used in recording and broadcasting. FCC regulations.

391R. Junior/Senior Seminar. (0.5:1:0 ea.) F, W, Sp

Required four times during junior/senior years while in professional program. College Lecture and Technology Department Lecture attendance required.

399R. Cooperative Education: Electronics Engineering Technology. (3:0:0 ea.) F, W, Sp, Su
Prerequisite: approval of department chair and cooperative education coordinator.

Experience in industrial environment.

Approved job function supervised by employer and EET coordinator. Formal technical report required.

421. Control Systems. (3:2:3) F, W
Prerequisite: Phscs 121, Math 113, EET 343, 345.

Switching circuits, first- and second-order systems using Laplace transforms feedback control, transfer functions, digital control.

441. Real-Time Computer Systems. (3:2:2) F, W
Prerequisite: EET 343.

Real-time operating systems, using a microcomputer operating system to illustrate system concepts in multitask real-time operating environments.

443. Light Frequency Systems. (3:2:3) F, W
Prerequisite: Phscs 221, EET 343, 345.

Electro-optic device and circuit characteristics and uses: light-emitting and detecting diodes, lasers, and fiber optics; modulation, detection, noise, and capacity. Fee.

444. Electronic Instrumentation. (3:2:3) W alt. yr. Prerequisite: EET 322, 341, 343.

Design and application of basic instrumentation to automated manufacturing and control processes.

447. Electronic Systems. (3:2:3) W, Sp
Prerequisite: EET 421, 441, 443.

Individual and team analysis, design, and implementation work on a team project. Oral and written reports. Fee.

492R. Special Problems in Electronics Engineering Technology. (1-3:Arr:0 ea.) F, W, Sp, Su
Prerequisite: EET senior standing, Eng1 316, and an approved project proposal.

Individual study in research and design related to electronics or computer-aided process control.

Manufacturing Programs: Manufacturing Engineering (MFE) and Manufacturing Engineering Technology (MET)

Kent E. Kohkonen, Program Coordinator
(435 CTB)

Careers in manufacturing engineering and manufacturing engineering technology are closely related, with much shared responsibility between them. The principal difference between engineering and engineering technology is that the engineer

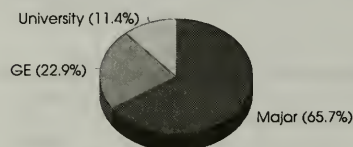
is more responsible for research and development of the tools and processes used to produce quality products within competitive cost constraints. The engineering technology graduate, on the other hand, is more often responsible for the selection and deployment of tools and processes for cost-effective manufacturing. He or she will need a thorough understanding of the relationships between diverse manufacturing functions. Both individuals will have to perform effectively as members of product development teams, assuring that all product design and planning is compatible with economic production practice.

The differences in the curricula are in the depth of mathematical rigor and in the scope of projects assigned. Courses in manufacturing engineering stress abstract thinking, creativity, and the underlying theory of subject matter. Manufacturing engineering technology students learn to understand the entire manufacturing system.

BS Manufacturing Engineering

The development of worldwide competition in manufacturing in recent years has raised the level of awareness of the importance of manufacturing skills and of the need for engineering professionals in this field. Manufacturing is a multidisciplinary subject, including such areas as technical management, process design, production planning, product design for manufacturability, material science, automation, quality control, group technology, communication protocols, simulation, economics, cost justification, integration, human factors, and organizational issues. Above all, manufacturing engineers must be prepared for a career of continuous adjustment and rapid technological change. This program provides the student with a solid technical foundation along with a broad general education to meet the dynamic challenges of a career in manufacturing.

Summary of Degree Requirements for BS Manufacturing Engineering



1. Total hours	135.5
2. Major hours ♦	89.0
3. General Education requirements	31.0
Core	12.0
First-Year Writing	3.0
Arts and Sciences electives	9.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0

- | | |
|--|------|
| 4. University requirements | 15.5 |
| Religion | 14.0 |
| PE/Health | 1.5 |
| 5. Elective hours | 0.0 |
| 6. 40 hours upper-division | |
| GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.5 |
| 16 hours per semester | 8.5 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

★ **Note:** Hours do not include any course that could be used to fill GE or university requirements.

The following courses are required for the BS in manufacturing engineering: MeEn 172, 371, 401; CivE 103, 203, 204; Phscs 122, 221; Chem 105; Math 112, 113, 312, 313; ECEn 301R; CS 130; Stat 361; Engl 316; Econ 110; MFE 291R (four semesters), 391R (three semesters), 491R (one semester), 232, 250, 251, 355, 340, 361, 362, 432, 475, 476, 480.

Math 110 and 111 (College Algebra and Trigonometry) and MeEn 170 (Basic Drafting) may be required of students who have not completed high school equivalents of these classes.

In addition to the above requirements, classes from each of the following course groups must be taken:

Basic science: one of Chem 106, Phscs 121, Stat 221, 321, 341.

Electrical engineering: ECEn 324 or 331.

Design: MFET 572 or 574.

Technical electives: two from among the following:

1. Design: MFET 572, 574, MeEn 373, 374, 473, 556, MET 336.
2. Materials: MFE 555, MeEn 352, 553, ChEn 578.
3. Processes: MFE 532, 537, MFET 528, 534.
4. Computer: CS 131.
5. Electronics and control: ECEn 321, 324, 331, MFET 529, 531, 547.
6. Facilities planning and simulation: MFET 580.
7. Optimization: MeEn 575.
8. Management: MFET 532, 533.
9. Practicum: MFE 199R, 394.

In addition to the above, university and General Education requirements must also be fulfilled.

Manufacturing Engineering (MFE)

Undergraduate Courses

Note: For 500-level and above manufacturing engineering courses, see Manufacturing Engineering and Engineering Technology (MFET) courses listed after the undergraduate courses.

199R. Cooperative Education for MFE. (1–3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

232. Manufacturing Processes. (3:2:3) W Prerequisite: Math 113.

Survey of common manufacturing processes including technological limitations and economic considerations. Influence of product design on process selection and manufacturing efficiency.

250. (MFE-MeEn) Science of Engineering Materials. (3:3:0) F, W, Sp Prerequisite: Chem 105 or 111.

Principles and properties of solid materials and their behavior as applied to engineering.

251. Material Science Laboratory. (1:0:3) F, W, Sp Prerequisite: concurrent registration in MFE 250. Fee.

291R. Seminar. (0:1:0 ea.) F, W

Seminar for all freshman and sophomore majors. Speakers from industry and university backgrounds discuss current topics in manufacturing. Attendance at monthly College Lecture also required.

340. Quality Assurance. (3:2:3) W, Sp Prerequisite: Math 113, Stat 361, MFE 232.

Organization, management, and control of quality in manufacturing, including metrology, nondestructive testing, and statistical process control.

355. Polymer Properties and Processing. (3:2:3) F Prerequisite: MFE 250, CivE 203.

Physical properties of polymeric materials; characteristics of polymer groups; manufacturing methods and resultant properties.

361. Manufacturing Instrumentation and Control. (3:2:3) W Prerequisite: Phscs 221, Math 313.

Fundamentals of mechanical and electrical control and instrumentation applied to manufacturing. Classical frequency and time domain feedback control systems and introduction to digital control.

362. Production Planning and Control. (3:3:0) F Prerequisite: MFE 232, Stat 361.

Organization, design, and management of production systems; different types of production systems; alternative production and inventory control strategies.

391R. Seminar. (0.5:1:0 ea.) F, W

Three semesters of enrollment required during junior and senior years. Current manufacturing topics presented. Attendance at monthly College Lecture also required.

394. Manufacturing Engineering Practicum. (3:0:6) W Prerequisite: second semester junior standing.

Students work in teams to solve problems encountered in local industry.

432. Advanced Manufacturing Processes. (3:3:0) W Prerequisite: MFE 250, 232.

Engineering analysis of manufacturing processes, including joining, forming, machining, casting, and particulate processes. Selection of process parameters, considering economics and material properties.

475, 476. (MFE-MeEn) Integrated Product and Process Engineering 1. (3:2:3 ea.) F, W Prerequisite: senior standing in mechanical or manufacturing engineering.

Product development process. Economic and manufacturing considerations in design; product liability and patents. Comprehensive two-semester design project from conception to manufacturing planning and prototype.

480. Process Planning and Estimating. (3:3:0) W Prerequisite: MFE 362 and senior standing.

Manufacturing analysis, process capability and selection, equipment specification, make or buy decisions, manufacturing economics, and cost estimating.

491R. Seminar. (0.5:1:0 ea.) F, W

One-semester seminar for graduating senior majors.

BS Manufacturing Engineering Technology

This four-year engineering technology baccalaureate degree program is fully accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (TAC/ABET) and prepares students for professional employment in industry's technical and managerial positions. The curriculum is designed to meet individual needs through common core courses and technical concentrations.

The manufacturing engineering technology curriculum is nationally recognized as a leader in its field. Excellent equipment and facilities are available for basic and advanced manufacturing processes, including machining, welding, cast metals, metal forming, and plastics.

All process courses include a concurrent laboratory section.

Additional offerings include numerical control programming, quality assurance, metallurgy, material science, production planning, and other support classes.

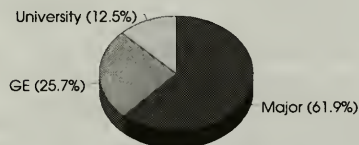
I. Required courses: MET 131, 230, 291R, 324, 329, 331, 335, 336, 338, 360, 391R, 431, 491R, 498 (senior semester), MFE 340, 362, 480, EET 314, MeEn 171, Stat 361, Math 110, 111, 112, 113, Phscs 121, 122, Econ 110, CS 142, Engl 316, Comms 150, CivE 103, 203, Chem 105.

II. Technical electives from MET 199R, MFET 531, 532, 533, 534, 538, 555, 572, MFE 394, 475, 476, EET 103, 131, 228, 236, Acc 200, BusM 361, OrgB 321, 425, Stat 221. Other courses need faculty approval.

Technical electives: In consultation with an advisor students may select a series of upper-division or graduate classes in such areas as manufacturing, welding, design, management, or the master's program in preparation for graduate work.

III. High school preparation: Recommended courses for high school include drafting, machine shop, algebra, trigonometry, physics, chemistry, and woodworking.

Summary of Degree Requirements for BS Manufacturing Engineering Technology



1. Total hours	132.5
2. Major hours*	82.0
3. General Education requirements	34.0
Core	12.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Manufacturing Engineering Technology (MET)

Undergraduate Courses

Note: For 500-level and above manufacturing engineering technology courses, see Manufacturing Engineering and Engineering Technology (MFET) courses listed after the undergraduate courses.

131. Machining Operations. (3:2:3) F, Su Capabilities and operation of basic machine tools and study of production machining processes. Application and use of inspection gages for quality control. Fee.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

230. Computer Numerical Control Programming. (3:2:3) F, Sp Prerequisite: MET 131, concurrent registration in Math 112.

Manual programming of computer numerical control machine tools for industrial applications. Standard EIA / ASC II programming codes and formats are utilized. Fee.

291R. Undergraduate Seminar. (0:1:0 ea.) F, W

Required of all undergraduate manufacturing engineering technology majors each semester of the freshman and sophomore years. College Lecture attendance required.

324. Joining Processes. (3:2:4) W, Su Prerequisite: CivE 203, MET 335.

Theory, application, and economics of various joining processes; welding, soldering, riveting, threaded fasteners, mechanical assembly tools and techniques. Fee.

329. Metal Forming. (3:2:2) W, Sp Prerequisite: CivE 203, MET 335.

Introduction to metal-forming theory as applied to production processes.

331. Cast Metal Processes. (3:2:3) F, Sp Prerequisite: MET 335, 336.

Melting, pouring, solidification, casting problems, design considerations, and testing as they apply to latest foundry processes. Automated and computer-controlled foundries.

335. Materials Science. (4:3:3) F Prerequisite: MET 131, Chem 105.

Properties, testing, heat treating, selection, and use of materials. Fee.

336. Fluid Power and Control. (3:2:2) W, Sp Prerequisite: Math 113; Phscs 122 or concurrent registration, EET 314.

Hydraulic and pneumatic systems as a means of transmitting and controlling power; component identification and operation; fluid power graphical symbols, circuits, and applications.

338. Machine Tool Performance. (3:2:2) F, Sp Prerequisite: MET 131, 335, Eng1316.

Cutting tool geometry, tool materials, forces, feeds, speed, surface finish, HP requirements, cutting fluids, vibration, and machine tool evaluation. Fee.

360. Plastics Materials and Processing. (3:2:3) W Prerequisite: MET 131, 335, Chem 105.

Design and processing of plastic materials for industrial applications. Fee.

391R. Junior/Senior Seminar. (0.5:1:0 ea.) F, W

Required three times during junior and senior years while in professional program. College Lecture attendance required.

431. Tool Design. (3:2:2) F, Sp Prerequisite: MeEn 171, Math 113, CivE 203; last-semester senior standing.

Design of special tooling as applied to manufacturing processes. Fee.

490R. Special Problems in Manufacturing Engineering Technology. (1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: instructor's consent.

491R. Senior Seminar. (0.5:1:0 ea.) F, W Prerequisite: senior standing.

Technical and professional activities by faculty, students, professional practitioners, and invited personnel. For all engineering technology majors. College Lecture attendance required.

498. Senior Manufacturing Project and Operations. (2:0:6) F, W Prerequisite: senior standing in manufacturing engineering technology or instructor's consent.

Planning, design, and manufacturing development of an assigned senior project. Required of all seniors.

Manufacturing Engineering and Engineering Technology (MFET)

Advanced Undergraduate or Graduate Courses

501. Fundamentals of Manufacturing Processes, Design, Materials, and Information Transfer. (3:2:2) Sp

Interrelation of manufacturing processes, design, materials, and information transfer. Importance of manufacturing in society.

528. Electronic Fabrication and Assembly. (3:2:3) F alt yr. Prerequisite: EET 314 or equivalent and instructor's consent.

Theory and application of manufacturing processes required to produce electronic equipment.

529. Manufacturing Information Processing and Networks. (3:2:3) W Prerequisite: Phscs 221; EET 443 or instructor's consent.

Function and system analysis and application for sensing, sending, and processing manufacturing information; metallic and lightwave technology networking; data, media, standards, topologies, protocols, instrumentation, and integration.

531. Advanced Computer Numerical Control Programming. (3:2:3) W Prerequisite: MET 230, CS 142, or instructor's consent.

Programming techniques and requirements for manufacturing components on computer numerical control machining centers, emphasizing programming, applications, and software development. Fee.

532. Group Technology. (3:2:2) F

Prerequisite: MFE 362 or instructor's consent.

Classification theory and practice applied to workpiece classification and coding, statistics, cellular production, design retrieval, and implementation strategies, emphasizing computer application.

533. Computer-integrated Manufacturing.

(3:2:3) W Prerequisite: MFE 480, 362, or instructor's consent.

Basic activities, elements, and principles of computer-aided manufacturing, including terminology, systems integration, architecture, database development, interfaces, and computer hardware and software requirements, with justification and implementation plans.

534. Automation. (3:2:2) F Prerequisite:

instructor's consent.

Determining appropriate levels of manufacturing automation based on economics and productivity. Elements of automation, including sensors, robots, conveyors, and part feeders.

536R. Advanced Process Mechanics. (3:2:3

ea.) F Prerequisite: MFE 432.

Analysis and experimental validation of selected manufacturing processes.

537. Advanced Mechanisms. (3:3:0) W

Prerequisite: MeEn 337.

Kinematics and dynamics of advanced mechanisms, such as robots, with computer simulation of their motion. Task planning and simulation of mechanism activities in manufacturing work cells.

538. Technical Management. (3:3:0) F

Techniques and tools for effective technical management. Management, analysis, cost justification, and communication skills within manufacturing or engineering environments.

540. Computer-aided Testing. (3:2:2) F alt. yr.

Prerequisite: instructor's consent.

Introduction to computer-aided testing for product quality assurance using microcomputers, IEEE bus instrumentation, and host minicomputer systems.

541. Advanced Materials Science. (3:3:0) Sp

alt. yr. Prerequisite: MET 335 or MFE 250; CivE 203.

Builds on student's manufacturing and materials background to investigate interrelationship of material and process.

547. Information Transmission. (3:2:3) F alt.

yr. Prerequisite: Phcs 221; EET 443 or instructor's consent.

Function and system analysis and applications for sensing, sending, and processing information.

553. (MFET-MeEn) Mechanical Behavior of

Polymers. (3:3:0) W Prerequisite: CivE 203 and MFE 355 or instructor's consent.

Generalized elasticity relationships, viscoelasticity, yielding and fracture, crazing, rubber elasticity, anisotropic behavior, processing effects on properties, optical and other properties.

555. Introduction to Composites. (3:2:3) F

Prerequisite: instructor's consent.

Structure, processing, properties, and uses of composite materials including various manufacturing methods and the relationship between properties and fabrication.

572. Design for Manufacturing. (3:2:2) F

Prerequisite: senior standing.

Introduction to design evaluation tools for use by product development teams, including Quality Function Deployment, Early Cost Estimating, and Design for Assembly.

574. Tool Engineering. (3:2:3) W Prerequisite:

MFE 432 and senior standing.

Design of production machines and tools with functionality, producibility, maintainability, and cost considerations utilizing concurrent product and process design approach.

580. Manufacturing Simulation. (3:3:0) W

Prerequisite: MFE 362 and instructor's consent.

Design and optimization of manufacturing systems using simulation. Simulation languages and modeling methodology.

591R. Graduate Seminar. (0.5:1:0 ea.) F, W

Prerequisite: graduate standing.

Topics in research and thesis writing. Graduate students will present thesis and dissertation subject.

592R. Materials Seminar. (0.5:0:0 ea.) F, W

Advanced topics in materials science and engineering.

595R. Special Topics. (1–18:Arr.:Arr. ea.) F,

W, Sp, Su Prerequisite: instructor's consent plus departmental approval.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

655. Polymer Processing. (3:3:0)**656. Microstructure and Properties of Metal Alloys.** (3:3:0)**698R. Master's Project in Computer-integrated Manufacturing.** (1–3:Arr.:Arr. ea.)**699R. Master's Thesis in Manufacturing.** (1–9:0:0 ea.)**799R. Doctoral Dissertation.** (1–18:0:0 ea.)**Mechanical Engineering**

Geoffrey J. Germane, Chair (242-C CB)

Professors

Chase, Kenneth W. (1968) BES, MS, Brigham Young U., 1962, 1964; PhD, U. of California, Berkeley, 1972.

Free, Joseph C. (1961) BES, Brigham Young U., 1958; MS, California Inst. of Technology, 1961; PhD, Massachusetts Inst. of Technology, 1967.

Heaton, Howard S. (1963) BES, U. of Southern California, 1957; MS, PhD, Stanford U., 1959, 1963.

Mortensen, Kay S. (1968) BS, MS, Utah State U., 1962, 1963; PhD, U. of Utah, 1967.

Raisor, E. Max (1968) BS, MS, Brigham Young U., 1968, 1975.

Ulrich, Richard D. (1968) BS, MS, PhD, Purdue U., 1954, 1955, 1959.

Wilkes, Doran F. (1958) BS, MS, Utah State U., 1951, 1955; EdD, U. of Missouri, Columbia, 1966.

Wille, Milton G. (1958) BA, BES, Brigham Young U., 1957, 1957; MS, California Inst. of Technology, 1958; PhD, U. of Michigan, 1964.

Associate Professors

Eastman, Paul F. (1985) BA, PhD, U. of Utah, 1960, 1965.

Germane, Geoffrey J. (1979) BS, MS, Rose-Hulman Inst. of Technology, 1972, 1975; PhD, Brigham Young U., 1978.

Parkinson, Alan R. (1982) BS, Brigham Young U., 1977; MS, PhD, U. of Illinois, 1979, 1982.

Queiroz, Mardson (1987) BS, MS, Brigham Young U., 1983, 1984; PhD, Carnegie-Mellon U., 1987.

Red, W. Edward (1983) BA, BSME, Rice U., 1965; PhD, Arizona State U., 1972.

Simmons, Val E. (1969) BS, U. of Utah, 1964; MS, Brigham Young U., 1967; PhD, Utah State U., 1970.

Smith, Craig C. (1980) BES, MS, Brigham Young U., 1969, 1970; PhD, Massachusetts Inst. of Technology, 1973.

Tolman, Wilford J. (1960) BS, MS, Brigham Young U., 1960, 1964.

Webb, Brent W. (1986) BS, MS, Brigham Young U., 1981, 1982; PhD, Purdue U., 1986.

Assistant Professors

Cox, Jordan (1986) BA, MS, Brigham Young U., 1983, 1984.

Jensen, C. Gregory (1983) BS, MS, Brigham Young U., 1979, 1982.

Magleby, Spencer P. (1989) BS, MS, Brigham Young U., 1983, 1983; PhD, U. of Wisconsin, Madison, 1988.

Sorensen, Carl D. (1987) BS, Brigham Young U., 1981; PhD, Massachusetts Inst. of Technology, 1985.

Adjunct Faculty

Simonsen, John M. (1954) BSME, U. of Utah, 1950; MSME, PhD, Purdue U., 1952, 1955.

Woolley, Ronald L. (1983) BES, MS, Brigham Young U., 1966, 1968; PhD, Stanford U., 1974.

Emeriti

Andersen, Blaine W. (1970) BS, U. of Utah, 1949; MS, PhD, U. of Illinois, 1951, 1953.
Cannon, John N. (1957) BS, MS, U. of Utah, 1952, 1955; PhD, Stanford U., 1965.
Polve, James H. (1969) BS, U. of Utah, 1948; MS, Princeton U., 1951; PhD, U. of Arizona, 1966; ME, U. of Utah, 1954.

Programs and Degrees

BS Mechanical Engineering
BS Honors in Mechanical Engineering and University Honors
MS Mechanical Engineering
PhD Engineering

Mechanical engineering is the branch of applied science that deals with the analysis, design, development, fabrication, and application of products that are predominately mechanical and energy related. By its very nature, mechanical engineering includes many varieties of specialization. All students are provided with a central core of engineering fundamentals.

By proper selection of option and technical elective courses, students can increase their depth in such specialized areas as (1) automation and robotics, (2) manufacturing systems, (3) aerospace, (4) automatic controls and systems analysis, (5) bioengineering, (6) fluid mechanics, (7) heat transfer, (8) computer-aided engineering, (9) materials and metallurgy, (10) mechanical design, (11) solid mechanics, (12) thermodynamics, and (13) vibrations and dynamics. Students are assigned an advisor to work with them in developing their individual program.

The curriculum in mechanical engineering is fully accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (ABET).

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

BS Mechanical Engineering

Professional Bachelor's Program

Any student may major in mechanical engineering by following the usual university procedures for declaring a major. Students who have questions are invited to visit the college advisement center (264 CB) or the Mechanical Engineering Department (242 CB) to talk with an advisor. All students are urged to declare their intention to major in the department upon first entry

to the university or as soon as possible thereafter.

I. Any student may enroll in all classes in the preprofessional program (see course requirements list to identify preprofessional and professional program requirements). To continue into the professional program, however, the student must make application and be accepted by the department after completing a specified set of preprofessional program acceptance requirements. Application by continuing as well as transfer students can be made anytime after successful completion of the following courses or their equivalent:

- A. 30 semester hours of graded university-level credit
- B. Math 112, 113
- C. Chem 105
- D. Phscs 121, 122
- E. CivE 103

A minimum grade of C– in each course in items A through E must be achieved, together with a university cumulative GPA of 2.0. In addition, preprofessional students are required to enroll in the department seminar, MeEn 191 or 291R, in each semester of residence. The application for acceptance should be made as soon as possible after the above requirements have been met. A preprofessional student may not take any professional program courses in mechanical engineering at the 300 level or above. Lack of continuous enrollment during fall and winter semesters will require reapplication to the professional program.

Acceptance into the professional program will be based primarily on the GPA received in the preprofessional courses already taken, including all grades received in repeated courses. The number of students the department will accept each year to the professional program will be based on available space and resources.

II. Application procedure: Application for acceptance may be made at any time after the preprofessional application requirements are completed. Students are urged to apply as soon as possible. Specific deadlines are June 1 for fall semester, October 1 for winter semester, and February 1 for spring term. Transfer students may be considered at other times provided they have been admitted to the university. Application forms are available in the college advisement center, 264 CB.

III. Academic standards and continuance: On gaining acceptance into the professional program, students must maintain the following minimum academic standards. Failure to do so may result in being terminated from the program.

- A. Maintain a minimum university cumulative GPA of 2.0. Anyone who accumulates grades below C– in excess of 6 semester credit hours in the professional program courses may not

take further professional program courses until he or she has reduced the number of unacceptable grade credits (through retaking courses) to 6 hours or less.

- B. Repeat the same professional program course only once.

All potential termination situations will be reviewed by a faculty committee, who will recommend the action to be taken.

To receive a bachelor's degree, the student must complete courses satisfying university General Education requirements and departmental requirements with a cumulative grade point average of at least 2.0 (C). The maximum D credit allowed is 6 credit hours in preprofessional-program courses and 6 credit hours in professional-program courses.

IV. The department requirements are given below:

- A. Prerequisite: MeEn 170; Math 110, 111 may be required if students have not taken the equivalent courses in high school.
- B. Required: The departmental requirements for the preprofessional and professional programs leading to the BS degree are given below in a suggested sequence. Curriculum flowcharts showing a four-year course sequence for the BS program are available from the Mechanical Engineering Department. See an advisor for additional guidance in course planning.

Suggested Sequence of Courses

Preprofessional Program

First Year	F	W
MeEn 191, 291R	0	0
Math 112, 113	4	4
Phscs 121*, 122	3	3
CivE 103		2
Chem 105	4	
CS 130 or 131	2	
MeEn 172		2

Second Year		
MeEn 250, 273	3	2
MeEn 291R	0	0
CivE 203, 204	3	3
Math 312, 313	3	3
Stat 361		3
Phscs 221	3	

Professional Program

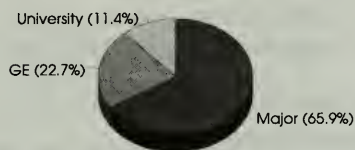
Third Year		
MeEn 321, 312	3	3
MeEn 363, option**	3	3
MeEn 372, option**	3	3
MeEn 391R	0.5	0.5
ECEn 301R		3
Engl 316	3	
Option**	3	
Fourth Year		
Options**	3	3
MeEn 475, 476	3	3

MeEn 491R	0.5	0.5
ECEn 331 or 324	3	
Technical electives	3	6

*Students with strong high school physics may choose to omit Phscs 121 (and start with Phscs 122) and take Chem 106 instead.

**Refers to one of five required option courses (see below).

Summary of Degree Requirements for BS Mechanical Engineering



1. Total hours	136.5
2. Major hours*	90.0
3. General Education requirements	31.0
Core	12.0
First-Year Writing	3.0
Arts and Sciences electives	9.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	15.5
Religion	14.0
PE/Health	1.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.5
16 hours per semester	8.5
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Summaries of the General Education requirements for engineering students are available in the advisement center, 264 CB. Note that Engl 316 is a departmental as well as General Education requirement.

Option Courses

Students must complete five option courses chosen from MeEn 322, 337, 352, 364, 371, 422, 435, 440, 473. No substitutions are allowed unless the class is a duplicate of one of those listed but from another department.

Technical Electives

Students must choose three technical electives in the BS program. The purpose of these courses is to provide the student with advanced engineering concepts. They are normally 500-level mechanical engineering courses. Other courses may be used within the following limitations:

1. At least two courses must be at the 500 level.
2. At least one course must be in mechanical engineering.
3. No courses are allowed below the 300 level.
4. No course may duplicate another course used to satisfy graduation requirements.
5. All courses must be from areas within engineering, technology, mathematics, statistics, or science.

BS with Honors in Mechanical Engineering and University Honors

I. Honors Program requirements: Honors General Education requirements as listed in the Honors Education section of this catalog.

II. Honors major requirements:

- A. Requirements of the mechanical engineering BS degree as listed in this catalog.
- B. Choose EST 200 as a Social and Behavioral Sciences elective. The purpose of this course is to foster a fuller integration between the major and General Education.
- C. Complete the Honors thesis by taking 6 credit hours of MeEn 499R, which will substitute for MeEn 475, 476. This will require choosing a faculty thesis advisor and an approved research topic, conducting the research, and writing an acceptable thesis on the work accomplished.

Students may choose to select the Honors sections of required courses that are available, including Math 112H, 113H, and Engl 316H. Additional courses or achievements beyond the major and GE requirements are needed to satisfy the Honors Arts and Sciences electives, the foreign language requirement, and the Honors "Masterworks of Art and Literature" requirement.

Students who wish to be in this program should notify the Mechanical Engineering Department.

Integrated Master's Program (MS)

To increase flexibility in scheduling, the integrated master's program allows work on the BS and MS degrees simultaneously during the last three years (six semesters). The BS degree may be received before or simultaneously with receiving the MS degree. Acceptance to the professional program is prerequisite to the integrated master's program. To enter the integrated master's program, students file an application and course outline for both the BS and MS programs at the beginning of the junior year. After acceptance, students may take courses for graduate credit. Before taking the last 30 hours of course work, students must be accepted by the Office of Graduate Studies. A minimum GPA of 3.0 during the previous 60 hours is required to be admitted to the integrated program. A

minimum GPA of 3.0 is required for master's program classes. See the BYU Graduate Studies Catalog for more details.

Professional Registration

The Mechanical Engineering Department prepares graduates to become registered professional engineers. General qualifications for becoming registered are explained in the College of Engineering and Technology section of this catalog. This status is vital to engineering practice in the public sector and to much consulting work. Students who wish to become registered as professional engineers are advised to take the Fundamentals of Engineering (FE) exam during their senior year. The FE exam also serves as an admission requirement for graduate work in the Mechanical Engineering Department.

Mechanical Engineering (MeEn)

Undergraduate Courses

170. Introduction to Engineering Graphics. (1-3:3:0) F, W, Sp Independent Study also.

Fundamentals of graphics language: geometric construction, orthographic projection, auxiliary views, sectioning, basic dimensioning, isometric views. Introduction to CAD. Application of graphics to design.

171. Advanced Mechanical Drafting. (3:3:0) W Prerequisite: MeEn 170 or equivalent.

Techniques of working drawings, precision dimensioning, SAE and aerospace drafting standards. Introduction to descriptive geometry and CAD engineering drawings.

172. Visual Thinking with CAD Systems. (2:2:0) F, W, Su Prerequisite: engineering drawing and CAD.

Communicating with engineering drawings, drawing interpretation; spatial problem-solving techniques; geometric dimensioning and tolerancing; CAD engineering drawing practices; applications to design.

191. New Student Seminar. (0:1:0) F, W

Topics of special interest to new mechanical engineering majors. Required of all first-semester freshman and sophomore transfer students.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

212. Engineering Graphics and Descriptive Geometry. (3:3:0) F, W Prerequisite: MeEn 170 or equivalent.

Principles of descriptive geometry, graphical statics, and vector analysis, both manual and CAD solutions.

250. (MeEn-MFE) Science of Engineering Materials. (3:3:0) F, W Prerequisite: Chem 105 or 111.

Principles and properties of solid materials and their behavior as applied to engineering.

273. Introduction to Computer-aided Engineering. (2:1:3) F, W Prerequisite: Math 112; CS 130, 131, or 142.

Modeling of physical systems and computer simulation systems. Introduction to numerical methods.

291R. Undergraduate Seminar. (0:1:0 ea.) F, W

Seminars on current topics required each semester for all freshman and sophomore majors not enrolled in MeEn 191. College Lecture attendance required.

312. Fluid Mechanics. (3:3:1) F, W, Sp Prerequisite: MeEn 321, 363.

Physics and modeling of fluid flow; fluid statics, dimensional analysis, momentum, internal and external viscous flow, compressible flow, and fluid machinery.

321. Thermodynamics. (3:3:0) F, W, Sp Prerequisite: Phscs 221, Math 313.

Fundamentals of classical thermodynamics, emphasizing macroscopic approach.

322. Applied Thermodynamics. (3:3:1) F, W Prerequisite: MeEn 321, 363.

Applied engineering thermodynamics including air and steam power cycles, thermodynamic relations, and introduction to combustion and equilibrium chemical reactions.

337. Kinematics. (3:2:3) F, Su Prerequisite: CivE 204.

Relative motion of links in mechanisms; velocities and accelerations of machine parts; rolling contact; cams; synthesis of mechanisms. Includes computer-aided engineering techniques.

352. Engineering Materials. (3:2:2) F, Sp Prerequisite: MeEn 250.

Integrated approach to engineering materials; properties and processing of metals, ceramics, polymers, and composites.

363. Elementary Instrumentation. (3:2:3) F, W, Sp Prerequisite: Phscs 221, Math 313.

Fundamentals of mechanical measuring systems; sensors, signal conditioning, statistical error analysis, dynamic response, standards.

364. Instrumentation Systems Design. (3:2:3) W Prerequisite: MeEn 363.

Design and analysis of instrumentation systems, fundamental sensor characteristics, computer data acquisition, time and frequency domain modeling.

371. Computer-aided Engineering Applications. (3:3:0) F, W, Su Prerequisite: MeEn 172, CE 203, 204, Fortran or C.

Application of computer-aided engineering tools to design; 3-D geometry and solid modeling; applying finite element analysis, kinematic analysis, and other software to engineering analysis.

372. Analysis and Manufacture of Machine Components. (3:2:3) F, W Prerequisite: CivE 203, MeEn 250.

Theory, design, and manufacture of machine components; application of computer-aided engineering methods.

391R. Junior Seminar. (0.5:1:0 ea.) F, W

Current topics. Two semesters of credit required of students in third year of department curriculum. College Lecture attendance required.

401. Thermodynamics, Heat Transfer, and Energy Analysis. (3:3:0) F Prerequisite: Math 113, Phscs 122.

Applied thermodynamics including first law, heat engines, heat pumps, and properties; basics of conduction, convection, and radiation; use of computer software. Nonmajors only.

422. Elementary Combustion Systems. (3:3:1) F Prerequisite: Chem 105, MeEn 322, or instructor's consent.

Introduction to first and second law ideal gas combustion systems along with elementary models of homogeneous and heterogeneous premixed and/or diffusion flames.

435. System Dynamics Modeling/Vibrations. (3:3:1) F Prerequisite: Math 313, MeEn 363, CivE 204.

Transient and frequency response of dynamic systems, modal analysis, vibration isolation, model approximation, computer simulations.

440. Heat Transfer. (3:3:1) F, W, Sp Prerequisite: Math 313, MeEn 321, 363, 312.

Fundamentals of heat transfer; basics of conduction, convection, and radiation; mass transfer by analogy; heat exchangers; computer applications to practical design and analysis problems.

473. Design for Manufacture. (3:2:3) W Prerequisite: MeEn 372.

Manufacturing considerations in machine design, tolerances, surface finish, design practice for manufacturing processes. Applications of computer-aided engineering methods.

474. Design of Mechanical Systems. (3:3:0) F, W, Sp, Su For seniors only.

Student design of a system, feasibility study, business-economic analysis, drawing, mockup, test prototype fabrication. Individual or group work; application of computer-aided engineering methods.

475, 476. (MeEn-MFE) Integrated Product and Process Engineering 1, 2. (3:2:3 ea.) F, W Prerequisite: senior standing in mechanical or manufacturing engineering.

Product development process. Economic and manufacturing considerations in design; product liability and patents. Comprehensive two-semester design project from conception to manufacturing planning and prototype.

491R. Senior Seminar. (0.5:1:0 ea.) F, W

Current topics. Two semesters of credit required of students in last year of department curriculum.

499R. Honors Thesis. (1–6:0:0 ea.) F, W, Sp, Su

Advanced Undergraduate or Graduate Courses

500. (MeEn-CivE) Design and Materials Applications. (3:3:0) W Prerequisite: CivE 203; MeEn 372 or CivE 321.

Applied and residual stress; materials selection; static, impact, and fatigue strength; fatigue damage; surface treatments; elastic deflection and stability—all as applied to mechanical design.

501. (MeEn-CivE) Stress Analysis and Design of Mechanical Structures. (3:3:0) Sp Prerequisite: CivE 321 or MeEn 372.

Stress analysis and deflection of structures; general bending and torsion, with computer applications to mechanical and aerospace structure design.

502. (MeEn-CivE) Plasticity and Fracture Mechanics. (3:3:0) Su on dem. Prerequisite: MeEn-CivE 503.

Continuum theory of plasticity, linear elastic fracture mechanics, introduction to structured continuum theories for polycrystalline media.

503. (MeEn-CivE) Theory of Elasticity. (3:3:0) W on dem. Prerequisite: CivE 203, Math 313.

Tensor notation, stress and deformation tensors, constitutive equations, field equations; plane-stress/plane strain, axisymmetric, thermoelasticity, and large deformation problems.

504. (MeEn-CivE) Matrix Structural Analysis. (3:3:0) W Prerequisite: CivE 321 or MeEn 372.

Matrix notation, principle of virtual forces, flexibility method, principle of virtual displacements, stiffness method, general purpose computer programs for structural analysis.

506. (MeEn-CivE) Introduction to the Finite Element Method. (3:3:0) F Prerequisite: CivE 321 or MeEn 372; MeEn 501 or MeEn-CivE 504 or instructor's consent.

Finite element stress analysis; mathematical foundations; simplex, isoparametric, bending, and axisymmetric elements; basic 2-D and 3-D modeling techniques; use of FEM computer software and hardware.

507. (MeEn-CivE) Advanced Finite Element Analysis. (3:3:0) W Prerequisite: CivE-MeEn 506.

Complex 3-D finite modeling, multiple element types, mesh generation techniques. Application to thermal stress, nonlinear materials, large deformations. Use of CAE software.

508. (MeEn-CivE) Dynamics of Structures and Mechanical Systems. (3:3:0) F Prerequisite: Math 313; CivE 321 or MeEn 372; MeEn-CivE 104.

Dynamic analysis of single and multi-degree-of-freedom systems, Ritz approximation, frequency domain analysis, geometric nonlinearity, material nonlinearity.

509. (MeEn-CivE) Spectral Analysis of Dynamic Systems. (3:3:0) W Prerequisite: Math 313, CivE 204.

Vibrations of elastic bodies and of systems with multiple degrees of freedom; random vibration. Computer-aided vibration testing and analysis.

510. Compressible Fluid Flow. (3:3:1) F Prerequisite: MeEn 312.

One-dimensional analysis of compressible flow with area change, friction, heat transfer, shock waves, and combined effects, including experimental methods.

511. Intermediate Compressible Flow. (3:3:0) W Prerequisite: MeEn 510.

Subsonic, transonic, and supersonic multidimensional flow. Basic equations; small perturbation theory; method of characteristics for steady and unsteady flow.

512. Boundary Layer Theory. (3:3:0) F Prerequisite: MeEn 312 or instructor's consent.

The stress tensor; Navier-Stokes equations; exact solutions for classical flows; Prandtl's boundary layer equations; separation; Karman-Pohlhausen integral methods; approximate solutions, numerical solutions, and applications.

515. Applied Aerodynamics and Flight Mechanics. (3:3:0) Sp Prerequisite: MeEn 312.

Modern applied aerodynamics including performance, stability, and control of aerospace vehicles.

521. Energy Resources and Conversion. (3:3:0) On dem. Prerequisite: MeEn 322 or instructor's consent.

New and conventional energy resources and energy conversion systems using the principles of thermodynamics.

531. Design of Control Systems. (3:3:0) W Prerequisite: MeEn 435.

Classical frequency response and time domain design of control systems. State variable control and computer simulation of control systems.

534. Dynamic System Analysis and Design. (3:3:1) On dem. Prerequisite: MeEn 435.

Lumped models of mechanical, electrical-mechanical, fluid, and thermal systems; graphic models; physical system response; computer simulation; design of dynamic systems.

537. Advanced Mechanisms. (3:3:0) W Prerequisite: MeEn 337.

Kinematics and dynamics of advanced mechanisms such as robots with computer simulation of mechanism motion.

541. Numerical Heat Transfer. (3:3:0) W Prerequisite: MeEn 440.

Heat transfer analysis by numerical methods. Finite difference and finite element methods, stability and error analysis, using digital computers.

542. Design of Heat Transfer Systems. (3:3:0) W Prerequisite: MeEn 440.

Design of devices where heat transfer is a predominant effect; practical problems from industry; energy conservation economics.

553. (MeEn-MFET) Mechanical Behavior of Polymers. (3:3:0) W Prerequisite: CivE 203; MFE 355 or instructor's consent.

Generalized elasticity relations, viscoelasticity, yielding and fracture, crazing, rubber elasticity, anisotropic behavior, processing effects on optical and other properties.

554. Advanced Manufacturing Processes. (3:3:0) On dem. Prerequisite: MeEn 250 or instructor's consent.

Analysis of forming, machining, welding, and casting processes, emphasizing metal microstructures. Selection of process parameters, considering economics and material properties.

556. Composite Material Design. (3:3:0) W Prerequisite: MeEn 250.

Macro- and micro-mechanical analysis and design of uni- and multi-directional composite materials.

557. Corrosion. (3:3:0) E, Sp Prerequisite: Chem 105.

Basic principles, eight common forms of corrosion, testing, materials, applications, modern theory, and high temperature metal-gas reactions.

570. (MeEn-CivE) Computer-aided Engineering Software Design. (3:3:0) F Prerequisite: Fortran, C, or similar computer language background.

Programming techniques and structure for interactive engineering design software. Use of engineering library utility routines for computer graphics, data access, and user interface. Term project required.

571. (MeEn-CivE) Engineering Computer Graphics and Software Design. (3:3:0) W Prerequisite: Fortran, C, or similar computer language background.

Application of modern computer graphics techniques to engineering problems; 2-D and 3-D transformations, perspective, hidden surface removal, lighting and shading. Graphics data structures, standards, device independency. Software design methodology. Term project required.

572. (MeEn-CivE) Computer-aided Geometric Design. (3:3:0) F Prerequisite: Fortran, C, or similar computer language background.

Mathematical theory of free-form curves and surfaces and solid geometric modeling. Bezier and B-spline curve and surface theory, parametric and implicit forms, intersection algorithms, topics in computer algebra, free-form deformation. Several programming projects.

573. CAD Software Development. (3:3:1) F Prerequisite: advanced Fortran or C.

Theory and development of CAD 2-D and 3-D systems including programming of curves, surfaces, solids, data fitting, and CAD interfaces.

574. Geometric Modeling with CAD Systems. (3:3:1) W Prerequisite: Math 313, MeEn 371.

Canonical and parametric modeling of basic geometric entities as they apply to mechanical design, including topology, single domain theory, and fractals.

575. (MeEn-CivE) Optimization Techniques in Engineering. (3:3:0) W Prerequisite: Math 313 and Fortran or similar computer language background.

Application of nonlinear and discrete optimization techniques to constrained engineering design. Theory and use of state-of-the-art computer routines.

576. Advanced Methods for Engineering Design. (3:3:0) Prerequisite: MeEn 475.

Emerging design methodology and design strategies for complex systems including decomposition methods, sensitivity analysis, robust design, and expert systems in engineering design.

581. Internal Combustion Engines. (3:2:3) F Prerequisite: MeEn 322.

Computer modeling of performance and fuel economy, including exhaust emissions of spark-ignition and compression-ignition engines. Theoretical and actual cycles. CFR and production engine dynamometer testing.

584. Gas Turbine and Jet Engine Design. (3:3:0) W Prerequisite: MeEn 312, 322.

Design and synthesis of land-based and aircraft gas turbines utilizing fluid flow and thermodynamic fundamentals. Extensive discussion of turbojet, turbofan, and turboprop engines.

591R. Seminar. (1:1:0 ea.) F, W

Graduate seminar to develop oral and written skills for presentation of current topics in mechanical engineering.

595R. Special Topics in Mechanical Engineering. (1-18:2:0 ea.) F, W, Sp, Su
Prerequisite: consent of department chair.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

611. Theories of Fluid Turbulence. (3:3:0)

612. Principles of Ideal-Fluid Dynamics. (3:3:0)

631. Advanced Automatic Control Applications. (3:3:0)

637. Dynamics in Mechanical System Design. (3:3:0)

641R. Special Topics in Heat-Transfer Theory. (3:3:0 ea.)

642. Radiative Heat Transfer. (3:3:0)

643. Convective Heat Transfer. (3:3:0)

651. Advanced Topics in Manufacturing. (3:3:0)

655. Polymer Processing. (3:3:0)

692R. Materials Seminar. (0.5:0:0 ea.)

695R. Special Problems for Master's Students. (1-3:3:0 ea.)

697R. Research. (1-9:Arr.:Arr. ea.)

699R. Master's Thesis. (1-9:Arr.:Arr. ea.)

791R. Seminar for Doctoral Students. (1:1:0 ea.)

795R. Selected Topics in Mechanical Engineering. (1-3:Arr.:Arr. ea.)

799R. Doctoral Dissertation. (1-18:Arr.:Arr. ea.)

Blanch, Mae (Mable) (1959) BA, Brigham Young U., 1950; PhD, U. of Colorado, 1966.

Cracroft, Richard H. (1963) BA, MA, U. of Utah, 1961, 1963; PhD, U. of Wisconsin, Madison, 1970.

Cronin, Gloria L. (1984) BA, Canterbury U., New Zealand, 1968; MA, PhD, Brigham Young U., 1976, 1980.

England, Eugene (1977) BA, U. of Utah, 1958; PhD, Stanford U., 1973.

Evans, David Louis (1954) BA, Idaho State U., 1948; MA, PhD, U. of Utah, 1953, 1968.

Fox, Charles Jay (1980) BA, MA, Brigham Young U., 1965, 1967; PhD, Purdue U., 1971.

Gassman, Byron W. (1960) BA, Brigham Young U., 1955; MA, PhD, U. of Chicago, 1956, 1960.

Geary, Edward A., Associate Dean, (1968) BA, MA, Brigham Young U., 1960, 1963; PhD, Stanford U., 1971.

Harris, John S. (1962) BA, MA, Brigham Young U., 1953, 1958.

Lambert, Neal E. (1966) BA, PhD, U. of Utah, 1961, 1966.

Murphy, John J. (1984) BA, MA, St. John's U., 1956, 1961.

Norris, Leslie, Humanities Professor of Creative Writing (1983) DipEd, MPhil, Southampton U., England, 1956, 1958.

Skousen, Royal (1979) BA, Brigham Young U., 1969; MA, PhD, U. of Illinois, 1971, 1972.

Tanner, Stephen L. (1978) BA, MA, U. of Utah, 1962, 1964; PhD, U. of Wisconsin, Milwaukee, 1969.

Tate, Charles D. (1960) BS, MS, Utah State U., 1954, 1958; PhD, U. of Colorado, 1966.

Taylor, Sally T. (1978) BS, MA, Brigham Young U., 1960, 1965; PhD, U. of Utah, 1975.

Thayer, Douglas H. (1957) BA, Brigham Young U., 1955; MA, Stanford U., 1959; MFA, U. of Iowa, 1962.

Walker, Steven C., University Alumni Professor (1966) BS, MA, Brigham Young U., 1965, 1966; PhD, Harvard U., 1973.

Wilson, William A., Humanities Professor of Literature and Folklore, (1984) BA, MA, Brigham Young U., 1958, 1962; PhD, Indiana U., 1974.

Lecturers

Hooker, Joyce S. (1980) BS, U. of Idaho, 1955; MIE, Utah State U., 1979.

Shakespeare, William O. (1974) BA, MA, Brigham Young U., 1970, 1982.

Associate Professors

Ballantyne, VerDon W. (1963) BS, MA, Brigham Young U., 1961, 1964.

Best, Brian S. (1960) BS, MA, Brigham Young U., 1958, 1962; PhD, U. of Wisconsin, Madison, 1971.

Best, Lorna Ruth Nielsen (1958) BA, MA, Brigham Young U., 1956, 1962.

Boswell, Grant M. (1984) BA, Brigham Young U., 1976; MA, PhD, U. of Southern California, 1982, 1985.

Clark, Gregory D. (1985) BA, MA, Brigham Young U., 1972, 1977; PhD, Rensselaer Polytechnic Inst., 1985.

Cowles, David L. (1985) BA, MA, Brigham Young U., 1978, 1980; PhD, U. of Chicago, 1985.

Eggington, William G. (1988) BA, Brigham Young U.—Hawaii, 1975; MA, PhD, U. of Southern California, 1981, 1984.

Hayes, Darwin L. (1961) BA, MA, Brigham Young U., 1957, 1963.

Horton, Frank K. (1955) BA, Brigham Young U., 1951; MA, U. of Southern California, 1957; DA, U. of Oregon, 1973.

Hunsaker, O. Glade (1964) BS, Utah State U., 1960; MA, Brigham Young U., 1964; PhD, U. of Illinois, 1970.

Johstoneaux, Raphael (1986) BS, MA, Brigham Young U., 1962, 1968; PhD, George Peabody Coll. for Teachers of Vanderbilt U., 1980.

Jorgensen, Bruce Wayne (1975) BA, Brigham Young U., 1966; MA, PhD, Cornell U., 1969, 1978.

Lundquist, M. Suzanne (1984) BA, MA, Brigham Young U., 1965, 1972; DA, U. of Michigan, 1985.

Nelson, Joyce (1990) BS, Utah State U., 1956; MS, Florida State U., 1971.

Parry, Catherine Corman (1985) BA, California State U., Fullerton, 1976; MA, PhD, U. of California, Los Angeles, 1978, 1985.

Paxman, David B. (1988) BA, Brigham Young U., 1971; MA, PhD, U. of Chicago, 1972, 1982.

Pedersen, Elray (1983) BS, MA, Brigham Young U., 1962, 1964; PhD, U. of Minnesota, 1977.

Smith, Marion K. (1964) BA, MA, Brigham Young U., 1961, 1966; PhD, U. of Texas, Austin, 1986.

Spencer, Darrell K. (1985) BA, MA, Brigham Young U., 1973, 1976; PhD, U. of Utah, 1985.

Tanner, John S. (1982) BA, Brigham Young U., 1974; PhD, U. of California, Berkeley, 1980.

Wahlquist, Elizabeth (1962) BA, Brigham Young U., 1955; MA, ML, Middlebury Coll., 1962, 1971.

Williams, Ray S. (1966) BA, Coker Coll., 1960; MA, PhD, Florida State U., 1962, 1965.

Young, Bruce W. (1983) BA, Brigham Young U., 1975; MA, Columbia U., 1976; AM, PhD, Harvard U., 1978, 1983.

Assistant Professors

Bennion, John S. (1989) BA, Utah State U., 1977; MA, Brigham Young U., 1981; PhD, U. of Houston, 1989.

Duerden, Richard Y. (1988); BA, MA, Brigham Young U., 1979, 1981; PhD, U. of Chicago, 1989.

Farr, Cecilia Konchar (1990) BA, Slippery Rock U. of Pennsylvania, 1982; MA, Brigham Young U., 1987; PhD, Michigan State U., 1990.

Hallen, Cynthia L. (1991) BA, MA, Brigham Young U., 1980, 1982; PhD, U. of Arizona, 1991.

Hansen, Kristine (1987) BA, MA, Brigham Young U., 1973, 1981; PhD, U. of Texas, Austin, 1987.

Engineering Technology

See Engineering.

English

Neal E. Lambert, Chair (3146 JKHB)

Grant M. Boswell, Coordinator, English Composition (3110 JKHB)

Professors

Beecher, Maureen Ursenbach (1980) BS, Brigham Young U., 1958; MA, PhD, U. of Utah, 1966, 1973.

Bell, Elouise M. (1963) BA, U. of Arizona, 1957; MA, Brigham Young U., 1959.

- Harris, Claudia W. (1990) BA, U. of Minnesota, 1970; MEd, Georgia State U., 1975, 1978; PhD, Emory U., 1990.
- Hatch, Gary L. (1992) BA, Brigham Young U., 1988; PhD, Arizona State U., 1992.
- Houston, Gail T. (1990) BA, Brigham Young U., 1973; MA, Arizona State U., 1978; MA, Brigham Young U., 1981; PhD, U. of California, Los Angeles, 1990.
- Howe, Susan (1988); BA, Brigham Young U., 1971; MA, U. of Utah, 1978; PhD, U. of Denver, 1989.
- Lawrence, A. Keith (1992) BA, MA, Brigham Young U., 1977, 1980; PhD, U. of Southern California, 1987.
- Lofgreen, Charlotte D. (1970) BA, California State Polytechnic Coll., 1959; MA, Brigham Young U., 1973.
- Madsen, Michael W. (1990) BA, MA, Brigham Young U., 1982, 1987.
- Norton, Don E. (1967) BA, MA, Brigham Young U., 1959, 1961.
- Oaks, Dallin D. (1990) BA, Brigham Young U., 1984; MA, U. of Utah, 1986; PhD, Purdue U., 1990.
- Ream, Susan E. (1961) BA, Brigham Young U., 1953; MA, Columbia U., 1958.
- Rigby, W. Dean (1966) BA, MA, Brigham Young U., 1953, 1970.
- Snyder, Phillip A. (1988) BA, MA, Brigham Young U., 1977, 1980; PhD, U. of North Carolina, Chapel Hill, 1988.
- Sorensen, Peter J. (1990) BA, MA, Brigham Young U., 1975, 1977, 1979; PhD, Washington State U., 1988.
- Thomas, Paul Roger (1980) BA, Brigham Young U., 1964; MA, U. of Virginia, 1967; DPhil, U. of York, England, 1982.
- Assistant Lecturers**
- Adams, Linda H. (1979) BA, MA, Brigham Young U., 1963, 1968.
- Dant, Doris R. (1989) BA, MA, Brigham Young U., 1966, 1972.
- Emeriti**
- Alder, Zane G. (1955) BS, MS, Utah State U., 1948, 1956.
- Arnold, Marilyn (1969) BS, MS, Brigham Young U., 1957, 1958; PhD, U. of Wisconsin, 1968.
- Bennion, George C. (1961) BA, Brigham Young U., 1949.
- Calder, Rose Eyring (1965) BA, Brigham Young U., 1932; MA, Columbia U., 1936; PhD, U. of California, Berkeley, 1944.
- Cheney, Thomas E. (1945) BS, Utah State U., 1930; MA, U. of Idaho, 1936.
- Clark, Bruce B. (1950) BA, U. of Utah, 1943; MA, Brigham Young U., 1948; PhD, U. of Utah, 1951.
- Clark, Marden J. (1949) BA, MA, Brigham Young U., 1948, 1949; PhD, U. of Washington, 1957.
- Cox, Soren F. (1955) BA, MA, Brigham Young U., 1952, 1956; PhD, U. of Minnesota, Minneapolis, 1964.
- Craig, Marshall R. (1953) BS, Brigham Young U., 1941; MA, PhD, Columbia U., 1947, 1968.
- Ellsworth, Richard G. (1958) BA, MA, Brigham Young U., 1951, 1952; PhD, U. of Maryland, College Park, 1959.
- Farnsworth, Dean B. (1953) BA, MA, U. of Utah, 1946, 1947; PhD, U. of California, Berkeley, 1950.
- Grass, Nan Osmond (1951) BA, Brigham Young U., 1930; MA, Stanford U., 1954.
- Harris, John B. (1958) BA, MA, Brigham Young U., 1955, 1956; PhD, Wayne State U., 1965.
- Hart, Edward L. (1952) BS, U. of Utah, 1939; MA, U. of Michigan, 1941; DPhil, Oxford U., England, 1950.
- Hendrickson, A. Lemar (1963) BS, MS, Utah State U., 1938, 1941.
- Howe, Alice E. (1958) BA, MA, Brigham Young U., 1958, 1961.
- Jacobs, Briant S. (1946) BA, Brigham Young U., 1939; PhD, U. of Iowa, 1944.
- King, Arthur Henry (1971) BA, Cambridge U., England, 1931; FD, U. of Lund, Sweden, 1941; MA, Cambridge U., 1942.
- Larson, Clinton F. (1947) BA, MA, U. of Utah, 1943, 1947; PhD, U. of Denver, 1956.
- MacKay, Ruth Mary (1962) BA, MA, Brigham Young U., 1960, 1962.
- McKellar, J. Glen (1964) BA, MA, Brigham Young U., 1960, 1962; PhD, U. of Colorado, 1967.
- McKendrick, John E. (1953) BA, MA, U. of Utah, 1942, 1949.
- Mitchell, Olive K. B. (1947) BA, U. of Arizona, 1932; MA, Brigham Young U., 1934.
- Monson, Samuel C. (1952) BS, Utah State U., 1941; MA, PhD, Columbia U., 1948, 1952.
- Morrell, Jeannette (1956) BA, MA, U. of Utah, 1933, 1935.
- Ridenhour, Ted E. (1959) BA, MA, Brigham Young U., 1957, 1960.
- Taylor, Celestia J. (1959) BA, MA, Brigham Young U., 1925, 1953.
- Thomas, Gordon K. (1976) BA, MA, Brigham Young U., 1959, 1960; PhD, Tulane U. of Louisiana, 1968.
- Thomas, John Alfred (1962) BA, MA, Brigham Young U., 1953, 1954; PhD, U. of Maryland, College Park, 1962.
- Thomas, Robert K. (1951) BA, Reed Coll., 1947; MA, U. of Oregon, 1949; PhD, Columbia U., 1967.
- Thomson, Woodruff C. (1950) AA, Snow Coll., 1936; BA, MA, PhD, U. of Utah, 1938, 1949, 1962.
- Waterstradt, Jean Anne (1945) AA, Weber Coll., 1943; BA, Brigham Young U., 1945; MA, U. of Southern California, 1955.
- West, Dale H. (1947) BA, Brigham Young U., 1940; MA, U. of Southern California, 1955; EdD, U. of Colorado, 1962.
- Wight, Marjorie (1963) BA, Brigham Young U., 1943; MA, U. of California, Los Angeles, 1958; PhD, U. of Southern California, 1967.
- Programs and Degrees**
- BA English
- BA English Teaching
- BA English Teaching Composite

BA Honors in English and University Honors

MA English

An English major studies language, writing, and literature. Students read, analyze, engage in library research, and write to prepare themselves for a variety of professions.

Because of the flexibility of various degree programs in English, it is important that students consult with department advisors as soon as they decide to become English majors. Details about options are available from these advisors and from the department secretary in 3146 JKH.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All BA Degree Programs in English

BA degrees in English have a common core of required courses in literature and writing and in language, arranged so that earlier courses lay foundations on which subsequent courses build. Therefore, level 1 (whether in literature and writing or in language) is prerequisite to level 2, level 2 to level 3, level 3 to level 4. However, courses within each level in literature and writing (Engl 252 and 291, for example) may be taken concurrently. Courses in the literature and writing core are not prerequisite to courses in the language core.

- I. Literature and writing core (27 hours):
 - Level 1: Engl 251.
 - Level 2: Engl 252, 291.
 - Level 3: Engl 292, 293.
 - Level 4: Engl 382 plus one course from each of the following three groups:
 - a. Engl 371, 372, 373, 385.
 - b. Engl 374, 375, 376.
 - c. Engl 361, 362, 363.

Note: English majors are exempt from the GE Advanced Writing requirement but must take Engl 252 as part of their major requirements.

- II. Language core (9 hours):
 - Level 1: Engl 223.
 - Level 2: Engl 324.
 - Level 3: Engl 325.
- III. The Senior Course (3 hours): Engl 495 (must be taken the senior year).
- IV. Electives: 9 hours minimum, depending on degree, at or above 300 level. Three hours of Engl 218R may count as electives. Electives may be taken concurrently with level 3 language or level 4 literature courses. Only 6 hours of any given R course may count as electives unless otherwise specified in the course description. Optional tracks are available in creative writing, writing

and editing, preprofessional preparation, etc. Further information is available from the department office. Courses that count as professional education for teacher certification (Engl 377, 378, 479) will not count as electives. Engl 499R will not count as an elective.

V. Majors must complete the General Education Foreign Language option.

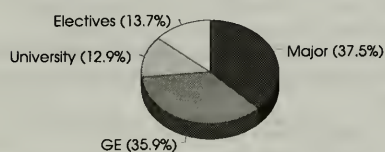
VI. No D credit in English is accepted for any major or minor in English.

VII. Residency: At least 12 of the 24 hours required for the English teaching minor, 24 of the 48 required for the English BA and English teaching BA, 24 of the 49 required for the Honors English BA, and 28 of the 56 required for the English teaching composite BA must be taken on the Provo campus.

BA English

Students should fulfill the core requirements, choosing a minimum of 9 elective hours according to emphasis option (creative writing, writing and editing, preprofessional preparation, etc.). Further information is available from faculty advisors or the department office.

Summary of Degree Requirements for BA English



1. Total hours	128.0
2. Major hours*	48.0
3. General Education requirements	46.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0-16.0
Advanced Writing	0.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	17.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA English Teaching

See English in the Secondary Education section of this catalog for information about this teaching major.

BA English Teaching Composite

See English in the Secondary Education section of this catalog for information about this teaching major.

BA with Honors in English and University Honors

I. Honors Program requirements:

- A. The Honors General Education requirements as listed in the Honors Education section of this catalog.
- B. General Education. English majors are exempt from the Advanced Writing requirement. They must take Engl 252 (formerly 314) as part of the English major and must complete the General Education Foreign Language option.

II. Honors major requirements. (49-60 hours):

- A. At least 24 hours must be taken in residence on BYU Provo campus.
- B. No D credit is accepted toward major.

Note: The major has as its basis a core of required courses in writing and literature and in language, arranged so that earlier courses lay foundations on which subsequent courses build. Therefore, level 1 is prerequisite to level 2, level 2 to level 3, etc. However, the courses within each level (252 and 291, for example) may be taken concurrently.

- C. Optional course: Engl 195
- D. Literature and writing core (27 hours): Engl 251, 252 (Honors Education section), 291, 292, 293, 382 (Honors Education section), plus one course from each of the following groups:
 1. Engl 371, 372, 373, 385.
 2. Engl 374, 375, 376.
 3. Engl 361, 362, 363.
- E. Language core (9 hours): Courses in the literature and writing core are not prerequisite to courses in the language core, but the three language courses build on one another and must be taken in sequence: Engl 223, 324, 325.
- F. Electives (9 hours minimum at or above the 300 level) may be taken concurrently with literature level 4 and language level 3 courses. Three hours of Engl 218R may count as electives. Only 6 hours of any given R course may count as electives unless otherwise specified in the course description. One Honors 203R or 303R literature seminar may be counted as an elective. Engl 499R will not count as an elective. Several optional areas of emphasis are available (creative writing, writing and editing, preprofessional preparation, etc.), some requiring more than the minimum 9 hours. Further

information may be obtained from the English Department (3146 JKHB).

G. Engl 495 (senior year).

H. Honors thesis (Engl 499R, 1-3 hours) and oral defense of it. Students must submit their thesis proposal to the English Department Honors coordinator, have it approved, and have an advisor for the thesis assigned at least two semesters before graduation.

English Teaching Minor

See English in the Secondary Education section of this catalog for information about this teaching minor.

English Nonteaching Minor (18 hours)

Engl 251 and at least 15 additional hours of 200- and 300-level courses. Engl 291, 292, 293 are recommended. At least 6 hours must be 300- or 400-level courses, and at least 9 hours must be taken on the Provo campus.

English for Nonnative Speakers

See Linguistics section of this catalog.

English (Engl)

Undergraduate Courses

100R. Special Programs in English. (1-2:2:0 ea.)

Programs for multicultural students offered through the Division of Continuing Education.

105. Expanded Literacy. (3:3:0) Independent Study also.

Expanding and integrating critical thinking, cultural values, reading-writing relationships in several genres; increasing skill and understanding in language conventions: sentence structure, usage, vocabulary.

115. College Writing and Reading. (3:3:0) Independent Study also.

Basic principles of critical reading and expository writing purpose, structure, logic, and language. Carries GE First-Year Writing credit.

195. Introduction to the English Major. (1:1:0)

Overview of the English major for the beginning student: curriculum, faculty, career options. Grading based chiefly on attendance.

201. Masterpieces of World Literature 1. (3:3:0) Honors also.

Major world civilizations from antiquity to early Italian Renaissance, emphasizing socioeconomic, political, intellectual, and aesthetic developments, with perspective supplied by works of literature and the arts.

202. Masterpieces of World Literature 2. (3:3:0) Honors also. Prerequisite: Engl 201.

Major world civilizations from Europe's High Renaissance to modern times, emphasizing socioeconomic, political, intellectual, and aesthetic developments, with perspective supplied by works of literature and the arts.

216. Experience in Writing. (3:3:0) Prerequisite: Engl 115 or equivalent.

Specifically for those who have developed basic writing skills but wish to improve their writing before taking an advanced composition course.

217. Writing for Children and Adolescents. (3:3:0) Independent Study also. Prerequisite: Engl 115 or equivalent.

Theory and practice of writing prose and verse for youth readership. Specific attention to requirements of the realistic adolescent novel.

218R. Creative Writing. (3:3:0 ea.) Independent Study also. Prerequisite: Engl 115 or equivalent. Only 3 credit hours may be applied to English major electives.

Individual sections may deal with poetry, personal essays, fiction, science fiction, or combinations of these.

220. Writing Personal History. (3:3:0) Independent Study also.

223. Introduction to the English Language. (3:3:0) Independent Study also.

Overview of English from linguistic point of view, emphasizing structure of English and social, biological, and psychological aspects of language.

225. Vocabulary Building. (2:2:0) Independent Study also.

Developing an effective vocabulary through study of prefixes, suffixes, and roots.

230. Introduction to Literature: Fiction, Drama, Poetry. (3:3:0) Independent Study also.

Introduction to various literary themes, forms, and authors. Does not fulfill English major requirements.

232. Shakespeare. (3:3:0) Independent Study also.

Careful reading and discussion of six to eight major plays. Does not fulfill English major requirement.

235. Masterpieces of American Literature. (3:3:0) Independent Study also.

Selected readings from Puritan times to the present.

236. Masterpieces of English Literature. (3:3:0) Independent Study also.

Selected readings from medieval times to the present.

251. Fundamentals of Literary Interpretation and Criticism. (3:3:0) Independent Study also. Prerequisite: Engl 115 or equivalent.

Introduction to concepts and practice of literary analysis, emphasizing elements of fiction, poetry, and drama.

252. Critical Writing and Research. (3:3:0) Independent Study also. Prerequisite: Engl 115 or equivalent; Engl 251.

Literature-based expository and research writing. Primarily for English majors and other language or literature students with adequate literary background.

280R. Studies in Theme and Form. (3:3:0 ea.) Topics vary.

291. Perspectives in English Literature 1. (3:3:0) Independent Study also. Prerequisite: Engl 251. Recommended: concurrent registration in Engl 252.

Applying fundamentals of literary analysis to representative British authors and works to 1800; emphasis on intrinsic values and historical-cultural contexts.

292. Perspectives in English Literature 2. (3:3:0) Independent Study also. Prerequisite: Engl 252, 291.

Critical study of representative British authors and works since 1800; emphasis on intrinsic values and historical-cultural contexts.

293. Perspectives in American Literature. (3:3:0) Independent Study also. Prerequisite: Engl 252, 291.

Critical study of representative American authors and works; emphasis on intrinsic values and historical-cultural contexts.

300R. English Literature in a Cultural Setting. (1-6:Arr:Arr. ea.) Prerequisite: for Study Abroad students only.

311. Writing About the Humanities. (3:3:0) Honors also. Prerequisite: Engl 115 or equivalent; junior or senior status.

Writing about the meaning, value, and quality of literature and other arts for both academic and mass audiences. Library research paper. Carries GE Advanced Writing credit.

312. Argumentation and Critical Writing. (3:3:0) Honors and Independent Study also. Prerequisite: Engl 115 or equivalent; junior or senior status.

Expository and persuasive writing focusing on practical reasons for evaluating audiences, generating and structuring an argument, and making stylistic decisions. Library research paper. Carries GE Advanced Writing credit.

313. Expository Writing for Elementary Education Majors. (3:3:0) Independent Study also. Prerequisite: Engl 115 or equivalent; Eled 310R or FamSc 322; junior or senior status.

Improving writing proficiency by focusing on the writing process, collaborative writing, and techniques for teaching writing. Library research paper. Carries GE Advanced Writing credit.

315. Writing in the Social Sciences. (3:3:0) Honors and Independent Study also. Prerequisite: Engl 115 or equivalent; junior or senior status.

Writing characteristic of disciplines inquiring into human behavior and institutions; focuses on correspondence, proposals, library paper, critiques, and arguments. Carries GE Advanced Writing credit.

316. Technical Writing. (3:3:0) Honors and Independent Study also. Prerequisite: Engl 115 or equivalent; junior or senior status.

Writing scientific and technical proposals, articles, reports, and memoranda. Research paper. Carries GE Advanced Writing credit.

317. Preprofessional Reading. (2:2:0)

Reading and researching in technical material; includes speed-reading skills. Preparation for technical-professional reading and reading portions of MCAT, DAT, LSAT, GRE, GMAT tests.

318R. Writing of Fiction. (3:3:0 ea.) Independent Study also. Prerequisite: Engl 218R or instructor's consent.

Creation of style and technique in prose fiction; discipline and practice of the writer. Individual consultation.

319R. Writing of Poetry. (3:3:0 ea.) Independent Study also. Prerequisite: Engl 218R or instructor's consent.

Creation of style and technique in poetry; discipline and practice of the poet. Individual consultation.

322. Modern American Usage. (3:3:0) Independent Study also.

Current conventions and effective use of American English. Required for English teaching minor.

324. History of the English Language. (3:3:0) Prerequisite: Engl 223.

Basic changes from Old English to modern English, including modern American dialects.

325. Traditional Grammar and Usage. (3:3:0) Independent Study also. Prerequisite: Engl 324.

Historical and descriptive study of categories and devices of traditional grammar, including critique of various rules of usage.

326. Semantics. (3:3:0)

General semantics, emphasizing the way in which words influence thought and behavior.

328. Study in English Grammars. (3:3:0) Independent Study also.

Historical views of language followed by studies of structural and transformational grammars.

333. The English Novel. (3:3:0) Independent Study also.

Great novels of the past three centuries selected from the writings of Defoe, Fielding, Scott, Austen, Thackeray, Bronte, Dickens, Eliot, Hardy, Conrad, and other major novelists.

336. The American Novel. (3:3:0) Independent Study also.

Great novels of the American tradition selected from Cooper, Hawthorne, Melville, Twain, James, Dreiser, Cather, Hemingway, Faulkner, Steinbeck, Fitzgerald, Bellow, Malamud, and other major novelists.

337R. Contemporary Literature. (3:3:0 ea.)

Trends, techniques, and themes in fiction, drama, and poetry since World War II.

338. The European Novel. (3:3:0)

Works of the principal European novelists, including Stendhal, Tolstoy, Dostoevsky, Mann, Kafka, Malraux, and others. In English translation.

341. English Drama. (3:3:0)

Beginnings to the mid-nineteenth century, emphasizing dramatic modes and forms.

343. Modern English and American Drama. (3:3:0)

345. Literature and Film. (3:3:0)

Emphasis on film as an interpretation of texts.

350. The Bible as Literature. (3:3:0) Independent Study also.

Literary artistry, human values, and cultural significance of the Bible.

351. Literary Theory and Criticism 1: The Critical Tradition. (3:3:0)

Historical survey from Plato to the twentieth century.

352. Literary Theory and Criticism 2: Contemporary Criticism. (3:3:0)

Introduction to issues in literary criticism through a survey of major movements of the twentieth century.

355. (Engl-CICv) Greek and Roman Classics and the English Tradition. (3:3:0)

Major works by such authors as Homer, the Greek and Roman tragedians, Thucydides, Vergil, and Petronius in English translation, emphasizing their influence on English and American literature.

358R. Ethnic, Regional, and Other Literatures in English. (3:3:0 ea.)

Native and Afro-American, Chicano, Third World, and other literatures in English.

359. The Short Story. (3:3:0) Independent Study also.

Critical study of American, English, and European short stories, emphasizing those of the twentieth century.

361. American Literature to the Mid-Nineteenth Century. (3:3:0) Prerequisite: Engl 293.

Literary tradition from its Puritan beginnings through transcendentalism, including fiction of Hawthorne and Melville.

362. Late Nineteenth- and Early Twentieth-Century American Literature. (3:3:0) Prerequisite: Engl 293.

Poetry of Whitman and Dickinson and fiction of Twain, Howells, Dreiser, and other realistic and naturalistic authors.

363. American Literature Since 1914. (3:3:0) Independent Study also. Prerequisite: Engl 293.

Significant trends from World War I to the present.

364. The Literature of the American West. (3:3:0)

Important literature that utilizes frontier and western situations. Focuses on the special problems of writing about the West.

366. Modern Poetry. (3:3:0) Independent Study also.

Major twentieth-century English and American poets.

368. Literature of the Latter-day Saints. (3:3:0)

Literary study of journals, letters, sermons, short stories, novels, poetry, and drama arising out of the Mormon experience from Joseph Smith to the present.

371. English Literature to 1500: The Medieval Period. (3:3:0) Prerequisite: Engl 291.

Principal works, mainly in translation, from Old and Middle English literature, emphasizing relationships to other early European literature.

372. English Literature from 1500 to 1603: The Early Renaissance Period. (3:3:0) Prerequisite: Engl 291.

English drama, poetry, and prose of the Tudor period.

373. English Literature from 1660 to 1780: The Classical Period. (3:3:0) Prerequisite: Engl 291.

English literature from the Restoration through the Age of Reason, including Defoe, Swift, Fielding, Dryden, Pope, and Johnson.

374. English Literature from 1780 to 1832: The Romantic Period. (3:3:0) Independent Study also. Prerequisite: Engl 292.

Includes writings of Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries.

375. English Literature from 1832 to 1890: The Victorian Period. (3:3:0) Prerequisite: Engl 292.

Includes writings of Carlyle, Tennyson, Browning, Arnold, Dickens, the Rossettis, Swinburne, Meredith, Hopkins, and their contemporaries.

376. English Literature from 1890 to 1950: The Modern Period. (3:3:0) Prerequisite: Engl 292.

Aspects of modernism from the aesthetic movement to the end of World War II, including the writings of Hardy, Shaw, Yeats, Conrad, Lawrence, Joyce, and Eliot.

377. Secondary Teaching Procedures. (3:3:0) Prerequisite: Engl 251, 322 or 325, ScEd 276R.

For English teaching majors and minors. Prerequisite to ScEd 476R.

378. Teaching Reading. (3:3:0) Prerequisite: ScEd 276R.

Theory, practices, experience, and insights that meet reading needs of secondary education students.

381. Chaucer. (3:3:0)

Intensive study of literature and language from medieval and modern perspectives. Includes some early works, but especially the *Canterbury Tales*.

382. Shakespeare. (3:3:0) Independent Study also.

Intensive reading and discussion of at least eight representative plays. For English majors and minors.

383. Milton. (3:3:0)

Analysis of poetry and selected prose, concluding with a detailed study of *Paradise Lost* and *Paradise Regained*.

385. English Literature 1603–1660: The Late Renaissance Period. (3:3:0) Prerequisite: Engl 291.

English drama, poetry, and prose of the Stuart period.

391. Introduction to Folklore. (3:3:0)

Major types of folklore (e.g., myth, legend, folktale, folksong, custom, and belief); practical experience in collecting folklore.

392. American Folklore. (3:3:0)

American folk art and literature and the historical and cultural circumstances from which they developed.

395R. Eminent Authors and Themes in Literature. (3:3:0 ea.) Independent Study also. Topics vary.

396. Studies in Women's Literature. (3:3:0)

Female-authored literary texts and critical literary theory concerning women.

399R. Cooperative Education. (1–9:0:0 ea.) Prerequisite: consent of cooperative education coordinator.

On-the-job training. Does not count toward the English teaching minor. No more than 3 hours may be counted toward English major or nonteaching minor requirements.

410R. Editing for Publication. (1–3:3:0 ea.)
Prerequisite: instructor's consent.
Recommended: Engl 322.

Lecture, discussion, and practice in manuscript selection, consultation with authors, editing, layout, and proofreading.

415R. Preprofessional Writing Workshop. (3:3:0 ea.) Prerequisite: Engl 252, 311, 312, 313, 315, or 316.

Developing proficiency and grace through reading and lecture; through writing, editing, and revising; and through peer and professional critique. Emphasis may vary with instructors.

418. Writer's Portfolio. (3:0:0) Prerequisite: Engl 218R, a GE Advanced Writing course, Comms 211 or 427, or comparable skills.

Individualized assistance in preparing a professional portfolio of the student's own writing in five categories: technical, scholarly, poetry, fiction or drama, and popular or journalistic writing.

420. Literature for Adolescents. (3:3:0)
Independent Study also.

Intended especially for English-teaching majors and minors.

423. Teaching Composition. (3:3:0)

Principles of rhetoric and linguistics applied to teaching composition on the high school and college levels. Recommended for all prospective secondary and college English teachers.

479. Secondary Student Teaching. (1–8:1:40)
Prerequisite: Engl 377, 378.

For course description and fee, see Secondary Education section of this catalog.

490R. Individual Readings in English. (1–3:0:0 ea.) Prerequisite: department chair's consent.

Language and/or literature beyond what is offered in the curriculum. May not be substituted for another catalog course.

495. The Senior Course. (3:3:0 ea.)
Recommended: completion of the entire English core.

In-depth study of a limited area of literature, language, or criticism. Content varies; requires research and writing.

499R. Honors Thesis. (1–6:0:0 ea.)

Does not count toward English major electives.

Advanced Undergraduate or Graduate Courses

500R. Eminent American Writers. (1–3:3:0 ea.)

Different writers each semester.

510R. Eminent English Writers. (1–3:3:0 ea.)
Different writers each semester.

515R. Advanced Scholarly Writing. (3:3:0 ea.)

Workshop for potential graduate students, graduate students, and professionals in all disciplines in preparing the thesis, dissertation, book chapter, and article.

516. Advanced Technical Writing. (3:3:0)
Prerequisite: Engl 316 or instructor's consent.

Advanced concepts, including literature of technical writing, liaison with technical staff, communication networks, rhetoric of graphics, and teaching and freelancing technical writing.

518R. Advanced Creative Writing. (3:3:0 ea.)
Prerequisite: Engl 318R, 319R, or instructor's consent.

Writing fiction, poetry, drama, and the essay; individual consideration of manuscripts; professional orientation. May be repeated for credit with departmental approval.

520R. Studies in Theme and Form. (1–3:3:0 ea.)

Topics vary: literature and film, myth and archetype, science fiction, etc.

521R. Studies in Language and Rhetoric. (1–3:3:0 ea.) Prerequisite: Engl 324.

Topics vary.

527. Early Modern English. (3:3:0)

Prerequisite: Engl 223, 324.

English language from about 1500 to 1800, with special emphasis on language of Shakespeare and the King James Bible.

528. Varieties of English. (3:3:0) Prerequisite: Engl 223, 324.

Regional and social variation in English, especially standard and nonstandard national and world Englishes, including English-based pidgins and creoles.

529. Structure of Modern English. (3:3:0)

Prerequisite: Engl 328, Ling 325, or instructor's consent.

English syntax through modern grammars; theories underlying those grammars.

590R. Individual Readings in English. (1–3:0:0 ea.) Prerequisite: graduate

coordinator's consent.

Language and/or literature beyond what is offered in the curriculum. May not be substituted for another catalog course.

599R. Cooperative Education. (1–9:0:0 ea.)
Prerequisite: department chair's consent.

On-the-job training.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

600. Introduction to Graduate Studies. (1:1:0)

610. Rhetoric and Composition. (3:3:0)

612. History of Rhetoric. (3:3:0)

614. Theory of Rhetoric and Composition. (3:3:0)

616. Research in Rhetoric and Composition. (3:3:0)

620. Language and Literature. (3:3:0)

624. Old English. (3:3:0)

625. Beowulf. (3:3:0)

626. Middle English. (3:3:0)

630. Theoretical Discourse. (3:3:0)

631. Studies in the English Novel. (3:3:0)

635. Studies in the American Novel. (3:3:0)

641. Studies in Drama. (3:3:0)

650R. Studies in Literary Criticism. (3:3:0 ea.)

655. Women's Textual Studies. (3:3:0)

658R. Ethnic, Regional, and Other Literatures in English. (3:3:0 ea.)

661. Studies in Early American Literature. (3:3:0)

662. Studies in Early Nineteenth-Century American Literature. (3:3:0)

664. Studies in Late Nineteenth-Century American Literature. (3:3:0)

665. Studies in Early Twentieth-Century American Literature. (3:3:0)

666. Studies in Late Twentieth-Century American Literature. (3:3:0)

667. Studies in Folklore. (3:3:0)

669R. Teaching English in the Secondary Schools. (2:2:0 ea.)

671. Studies in English Medieval Literature. (3:3:0)

672. Studies in English Renaissance Literature. (3:3:0)

673. Studies in English Classicism. (3:3:0)

674. Studies in English Romanticism. (3:3:0)

675. Studies in Victorian Literature. (3:3:0)

676. Studies in Modern British Literature. (3:3:0)

680. Studies in Contemporary Literature. (3:3:0)

682. Studies in Shakespearean Scholarship and Criticism. (3:3:0)

699R. Master's Thesis. (1–18:Arr:Arr. ea.)

English as a Second Language

See Linguistics.

European Studies

See Kennedy Center for International Studies, David M.

Evening School

See Division of Continuing Education.

Family Sciences

Terrance D. Olson, Chair (1000 SWKT)

Professors

- Allred, G. Hugh (1966) BA, MA, Brigham Young U., 1957, 1960; EdD, U. of Oregon, 1966.
- Brasher, Ruth E. (1969) BS, Brigham Young U., 1951; MA, U. of Maryland, 1959; PhD, Utah State U., 1969.
- Burr, Wesley R. (1969) BS, MS, Brigham Young U., 1960, 1961; PhD, U. of Minnesota, Minneapolis, 1967.
- Crane, D. Russell (1983) BA, California State U., Hayward, 1975; MS, PhD, Brigham Young U., 1978, 1979.
- Feinauer, Leslie L. (1984) BS, Brigham Young U., 1968; MS, U. of Utah, 1969; PhD, Brigham Young U., 1981.
- Galbraith, Richard C. (1975) BS, Brigham Young U., 1971; MS, PhD, Northwestern U., 1973, 1975.
- Harper, James M. (1979) BS, MS, Brigham Young U., 1974, 1976; PhD, U. of Minnesota, Minneapolis, 1979.
- Larsen, Jean M. (1963) BS, MS, Brigham Young U., 1953, 1960; PhD, U. of Utah, 1972.
- Mead, D. Eugene (1967) BA, U. of Oregon, 1956; MA, San Jose State Coll., 1963; EdD, U. of Oregon, 1967.
- Olson, Terrance D., (1974) BS, MS, Brigham Young U., 1967, 1969; PhD, Florida State U., 1972.
- Peery, J. Craig (1980) BA, Columbia Coll., 1970; MA, PhD, Columbia U., 1973, 1973.
- Price, Alvin H. (1966) BS, Brigham Young U., 1960; MA, PhD, U. of Minnesota, Minneapolis, 1963, 1966.
- Stahmann, Robert F. (1975) BA, Macalester Coll., 1963; MS, PhD, U. of Utah, 1965, 1967.
- Vance, Barbara Jane (1967) BA, U. of Utah, 1956; MA, Brigham Young U., 1959; PhD, Stanford U., 1967.

Associate Professors

- Barlow, Brent Alvin (1977) BS, MA, Brigham Young U., 1966, 1968; PhD, Florida State U., 1971.
- Beutler, Ivan F. (1981) BS, MS, Utah State U., 1969, 1970; MS, PhD, Purdue U., 1972, 1974.
- Draper, Thomas W. (1982) BS, MS, Brigham Young U., 1971, 1973; PhD, Emory U., 1976.

- Hart, Craig H. (1992) BS, MS, Brigham Young U., 1980, 1982; PhD, Purdue U., 1987.
- Holman, Thomas B. (1985) BA, Utah State U.; MEd, PhD, Brigham Young U., 1976, 1981.
- Larson, Jeffrey H. (1987) BS, MS, Brigham Young U., 1971, 1974; PhD, Texas Tech. U., 1980.
- McKee, Trevor R. (1974) BA, MA, PhD, Brigham Young U., 1958, 1962, 1973.
- Poduska, Bernard E. (1983) BA, MA, California State Coll., Fullerton, 1966, 1968; PhD, Brigham Young U., 1983.
- Robinson, Clyde C. (1990) BS, MS, Brigham Young U., 1972, 1976; PhD, U. of North Carolina, Greensboro, 1982.
- Scoresby, A. Lynn (1970) BS, MA, Brigham Young U., 1965, 1966; PhD, U. of Minnesota, Minneapolis, 1969.
- Watson, Wendy L. (1993) BA, U. of Hawaii, 1973; MS, Brigham Young U., 1975; PhD, U. of Calgary, Canada, 1984.

Assistant Professors

- Bahr, Kathleen S. (1970) BS, MS, Utah State U., 1968, 1970; PhD, Michigan State U., 1982.
- Ellsworth, Carol (1969) BS, Colorado State U., 1951; MA, Columbia U., 1964; EdD, Brigham Young U., 1980.
- Garrison, Carolyn (1970) BS, Oregon State U., 1961; MS, Iowa State U. of Science and Technology, 1971; PhD, Purdue U., 1978.
- Hawkins, Alan J. (1990) BS, MS, Brigham Young U., 1979, 1984; PhD, Pennsylvania State U., 1990.
- Klein, Shirley R. (1986) BS, U. of Arizona, 1966; MS Brigham Young U., 1984, PhD, U. of Utah, 1990.
- Rowley, Maxine Lewis (1979) BA, Brigham Young U., 1960; BA, U. of Utah, 1974; MS, Utah State U., 1979, PhD, Brigham Young U., 1989.

Emeriti

- Barlow, Frances P. (1957) BS, MEd, Utah State U., 1933, 1938.
- Bastian, Beth S. (1964) BS, Utah State U., 1950; MS, Kansas State U., 1955.
- Cahoon, Owen W. (1970) BS, MS, Utah State U., 1963, 1964; DEd, Pennsylvania State U., 1970.
- Cannon, Kenneth Lynn (1956) BS, Brigham Young U., 1935; MS, PhD, Iowa State U. of Science and Technology, 1948, 1954.
- Cutler, Virginia F. (1946) BS, U. of Utah, 1926; MA, Stanford U., 1937; PhD, Cornell U., 1946.
- Devey, Ottella T. (1959) BS, MS, Brigham Young U., 1956, 1959.
- Edwards, Kay P. (1974) BS, M.S., Utah State U., 1962, 1964; PhD, Cornell U., 1969.
- Hoopes, Margaret H. (1970) BS, Ricks Coll., 1953; MS, Brigham Young U., 1962; PhD, U. of Minnesota, Minneapolis, 1969.
- Knowles, Elmer M. (1962) BS, MS, Utah State U., 1949, 1950; PhD, Cornell U., 1952.
- Lewis, Stella D. (1956) BS, MHE, Brigham Young U., 1938, 1966.
- Moss, J. Joel (1961) BS, MS, Brigham Young U., 1948, 1949; PhD, U. of North Carolina, Chapel Hill, 1954.

- Porter, Blaine R., (1955) BS, MA, Brigham Young U., 1947, 1949; PhD, Cornell U., 1952.
- Poulson, Virginia B. (1950) BS, Brigham Young U., 1931; MEd, Colorado State U., 1955.
- Taylor, Barbara J. (1957) BS, MS, PhD, Brigham Young U., 1957, 1960, 1971.
- Thorup, Roine F. (1979) AA, Ricks Coll., 1937; BS, Utah State U., 1939; MS, PhD, U. of Minnesota, Minneapolis, 1956, 1968.

Programs and Degrees

BS Family Sciences

Emphases:

Early Childhood Education
Family Science
Home and Family
Home Economics Education
Human Development

MS Family Sciences

Emphases:

Family Sciences
Home Economics Education

MS Marriage and Family Therapy

PhD Family Sciences

PhD Family Studies

PhD Marriage and Family Therapy

Family sciences scholarship provides (1) frameworks by which human development and family behavior can be explained, (2) applications of principles and skills that contribute to quality family relationships and appropriate use of family resources, and (3) research that addresses optimal human development, the wise use of family resources, and the well-being of family members.

Certification programs in early childhood (with elementary education) and home economics (with secondary education) are available. Students with bachelor's degrees in nonteaching majors in family sciences and in the social sciences generally are in demand in settings where knowledge of human behavior, interpersonal competence, and personal use of resources are essential. However, graduate study is necessary for the most attractive opportunities within the profession. Family sciences graduates learn principles applicable to their personal as well as professional lives. The BS degree can be a springboard into graduate studies in the social sciences, law, and home economics.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Family Sciences

- I. Major courses: FamSc 160, 210, 250, 300, 310 (15 hours).
- II. BYU residency requirement: 15 hours.

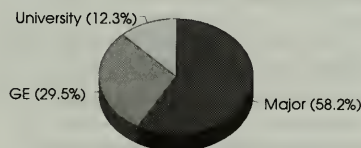
III. No D credit accepted in any major courses.

Early Childhood Education Emphasis

Early childhood education teachers guide young children in the context of the natural environment and in making the transition from home to a formal school setting. Therefore, an emphasis in early childhood education leads to a degree that includes dual certification in both early childhood and elementary education (in cooperation with the Department of Elementary Education). The kindergarten endorsement can only be obtained as part of the Early Childhood Certificate. Students in this major are certified to teach kindergarten through primary and intermediate grades in the public schools as well as in private and public preschools. At press time of this catalog, the possibility of completing an early childhood certificate (K-3) without also obtaining the elementary education certificate (1-8) was being considered. (For the current status of this proposal, contact the Family, Home, and Social Sciences Advisement Center in the Smith Family Living Center.) Requirements are as follows:

- I. Students must obtain acceptance into the elementary education certification courses and the early childhood education methods/teaching practica before registering for professional sequence courses.
- II. 2.85 or higher GPA and a basic skills test.
- III. In addition to above core requirements: FamSc 315, 322, 423, 424 (15 hours).
- IV. Supporting courses required to meet certification requirements: ELED 350, 351, 352, 353, 354, 355, 360, 370, 400; Math 305, 306; Music 378; EPsy 101R, 204; PE 375.
- V. Additional supporting courses: Art 326, PhyS 110A,B, Biol 100, 101, Zool 334, Geog 120, Engl 313, ELED 340, IS 286, PE 169, Dance 275, RelC 491, 492, Hlth 361.
- VI. Pre-Professional Skills Test (PPST) required.

Summary of Degree Requirements for Early Childhood Education Emphasis



1. Total hours	142.5
2. Major hours and certification requirements*	83.0
3. General Education requirements	42.0
Core	18.0
First-Year Writing	3.0
Arts and Sciences electives	12.0

Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	17.5
Religion	14.0
PE/Health	3.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	11.0
16 hours per semester	9.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Note: Courses in section V also fill GE requirements.

To obtain a program guide outlining a suggested sequence of courses and other details, contact the advisor for early childhood education in the College of Family, Home, and Social Sciences Advisement Center, 2254 SFLC, or the program coordinator in 1319 SFLC.

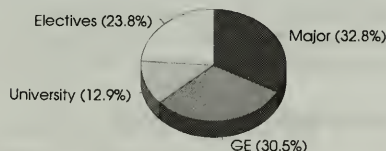
Family Science Emphasis

This emphasis allows students with a variety of personal and professional interests to study the central unit of society, the family. Majors who wish to pursue graduate study in counseling, law, education, social science, family resource management, or business will structure their electives differently from those of majors who wish a liberal arts education.

- I. Required in addition to above core requirements: FamSc 360, 371, 372, 460, 461.
- II. Electives (15 hours): 3 hours from FamSc 301, 302, 303; 12 hours from 304, 311, 312, 313, 315, 356, 363, 395R, 404, 465.

Students wishing to go on to graduate school, but who choose language rather than mathematics as their advanced skill, are encouraged to take Soc 205 or Stat 221 and 223 or 222.

Summary of Degree Requirements for Family Science Emphasis



1. Total hours	128.0
2. Major hours*	42.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0

Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	30.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

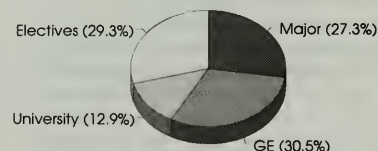
*Note: Hours do not include any course that could be used to fill GE or university requirements.

Home and Family Emphasis

This emphasis focuses primarily on the home and family within a context of a liberal arts education. Designed to help students prepare for life generally, it will enhance their contributions to home and family through heightened ability to manage, learn, lead, relate, and communicate effectively. It also aims to enrich one's capacity to strengthen the tie between the kin realm and the surrounding public realm. This emphasis does not have a specific career or graduate school focus.

- I. Required in addition to above core requirements: FamSc 150, 230, 371.
- II. One of FamSc 304, 372; two of 301, 302, 303, 360, 465; three of 335, 340 (or any 3-hour family sciences class), CITx 300, (or any 3-hour clothing and textiles class), FSN 100.

Summary of Degree Requirements for Home and Family Emphasis



1. Total hours	128.0
2. Major hours*	35.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	37.5
6. 40 hours upper-division GPA requirement of 2.0	

7. Estimated semesters to graduate
13 hours per semester 10.0
16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦ **Note:** Hours do not include any course that could be used to fill GE or university requirements.

Home Economics Education Emphasis

Home economics education is the emphasis leading to vocational teacher certification through the State Department of Public Instruction. Provision is also made for obtaining an occupational endorsement on the teaching certificate. Requirements are as follows:

- I. Have and maintain 2.85 GPA.
- II. Pass the Pre-Professional Skills Test (PPST) with a score greater than or equal to 170 before student teaching.
- III. Complete the above core requirements (with the exception of FamSc 303 replacing 310), receiving no D grades in major classes (secondary education, clothing and textiles, family sciences, food science and nutrition, nursing).
- IV. Seek advisement in college advisement center at earliest possible date.
- V. See Home Economics in the Secondary Education section of this catalog for required courses. For students who wish a home economics emphasis without certifying to teach, see preceding Home and Family emphasis.

Note: A delay of ten years or more before completing graduation/certification requirements will necessitate taking additional courses to update subject matter.

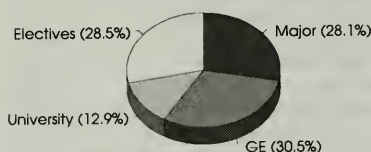
Human Development Emphasis

Students are offered a detailed understanding of the processes and stages that individuals undergo as they progress from conception to maturity. This emphasis also provides a base for graduate study in human development and related behavioral sciences.

- I. Required in addition to above core requirements: FamSc 312, 313, 315.
- II. Electives (18 hours): FamSc 301, 303, 304, 311, 317, 371, 395R, 460, 461, Psych 321, Stat 221 or 222.

Note: Students planning on graduate work in any social or behavioral science should take at least one semester of statistics.

Summary of Degree Requirements for Human Development Emphasis



1. Total hours 128.0
2. Major hours ♦ 36.0
3. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 36.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦ **Note:** Hours do not include any course that could be used to fill GE or university requirements.

Minor in Family Sciences

A minor in family sciences is complementary to an array of majors in the social sciences, humanities, and business. Prospective law students can also benefit from a focused sequence of courses in the dynamics of human development and patterns of family behavior.

The minor in family sciences helps students learn enough about family processes that they can become more effective in their own families and in professions involving work with people. It also helps them learn ways to be more effective in avocational roles in churches, neighborhoods, and communities; and it helps them better understand the important role the family plays in society.

Requirements: FamSc 160, 210, 371; one course from FamSc 301, 302, 303, 304; and one family science elective.

Family Sciences (FamSc)

Undergraduate Courses

150. Principles of Home and Family Life. (3:3:0)

Examines home as a fundamental civilizing influence; integrates views of family science and home economics.

160. Introduction to Family Sciences. (3:3:0)

Honors and Independent Study also. Basic concepts and principles of management and relationships.

210. Human Development. (3:3:0)

Independent Study also. Growth and development of the child from conception through adolescence; influences of family, peers, and schools.

230. Housing the Family. (3:3:0) Prerequisite: Des 102.

Social-psychological, economic, and political aspects of housing; selection and space planning.

250. Theories in Family Perspective. (3:3:0)

Prerequisite: FamSc 160, 210. Introduction of major theoretical perspectives and of philosophical issues. Readings include representative papers applying theoretical and philosophic tenets.

288. Vocational and Occupational Education. (3:2:1)

Legislation and public policy foundations for vocational education, related to occupational programs, public relations, and in-school experiences.

300. Critical Inquiry and Research Methods. (3:3:0) Prerequisite: FamSc 160, 210, or instructor's consent.

Philosophies of critical inquiry. Principles of designing, conducting, and reporting social science investigations.

301. Preparation for Marriage. (3:3:0)

Factors related to quality relationships, mate selection, and the transition into marriage.

302. Marriage Enhancement. (3:3:0)

Designed primarily for those who are married or engaged. Couples are encouraged to enroll together.

303. (FamSc-Psych) Parenting. (3:3:0)

Independent Study also. Theories and skills related to quality parent-child relationships.

304. Family Money Management 1. (3:3:0)

Principles in family science applied to family money management.

310. Advanced Human Development. (3:3:0) Prerequisite: FamSc 210 or instructor's consent.

Evaluation of research on physical, mental, emotional, and social development.

311. Development in Infancy. (3:3:0)

Conception, prenatal development, pregnancy. Physical, cognitive, and social development of the first twenty-four months. Implications for guidance and care in the family.

312. Personality and Social Development. (3:3:0) Prerequisite: FamSc 210 or instructor's consent.

Processes and sequences of personality and social development.

313. Cognitive Development. (3:3:0)

Development of mental abilities; effects of maturation and learning on memory, perception, attentional processes, intelligence, social cognition.

315. Language Development. (3:3:0)

Prerequisite: FamSc 250 or 310 or instructor's consent.

Philosophical, social, intellectual, and emotional contexts of language acquisition and usage.

317. Subculture Effects on Child Development. (3:3:0)

Intellectual, social, emotional, moral, and physical factors.

322. Childhood Socialization and Learning Lab. (4:1:3) Prerequisite: FamSc 160, 210, 250; register a semester in advance.

An initial practicum experience with young children to increase understanding of socialization and learning processes, to create appropriate learning opportunities for children, and to develop management skills.

335. Household Equipment. (3:2:1)

Selection and performance of cookware and small and large household appliances; equipment function based on physical science principles; consumer use and energy conservation.

340. Family Meal Management. (2:1:3)

Organization and management of time, energy, finance, and nutrition in planning and preparing family meals. Lab required.

356. Interactional Interviewing Skills in Family Sciences. (3:2:1)

Interactional counseling techniques, issues, and theories; skill development in dyadic and family interaction observation. Lab required.

360. Issues in Family Sciences. (3:3:0)

Prerequisite: FamSc 160.

Discussion of contemporary marriages and families, including sexuality, internal dynamics, and interpersonal relationships.

363. Family Life in the Middle and Later Years. (3:3:0) Prerequisite: FamSc 160 or instructor's consent.

Adjustments to physical, emotional, social, and economic changes. Needs arising from changes in family relationships, living arrangements, and employment; retirement planning.

371. Work and Relationships in the Home. (3:3:0) Prerequisite: FamSc 160.

Theoretical and practical implications of interplay between household work, family relationships, and human resource development.

372. Temporal Welfare in Families. (3:3:0) Prerequisite: FamSc 160 or instructor's consent.

Assumptions, philosophy, and theory accounting for resource allocation, use, and meaning in families.

375. Family Economics and Aging. (3:3:0)

Economic challenges relating to the elderly and their families. Specifically designed for students seeking certification in gerontology.

377. Curriculum Development in Home Economics Education. (3:3:0) Prerequisite: concurrent registration in ScEd 276R.

Linkage between theory and practice in secondary classrooms.

395R. Special Topics in Family Sciences.

(1–3:0:0 ea.) Independent Study also.

Prerequisite: instructor's consent.

Topics include the single adult in family and society, duolingual parenting, and readings in family sciences.

399R. Cooperative Education: Internship in Family Sciences. (1–9:Arr:Arr. ea.)

Prerequisite: consent of program coordinator.

Supervised preprofessional experiences in community settings.

403R. Research Practicum. (3:1:2 ea.)

Prerequisite: FamSc 300.

Research experience in a project directed by a faculty member.

404. Family Money Management 2. (3:3:0)

Prerequisite: FamSc 304.

Theory and practice in family science applied to family money management.

423. Practicum in Preschool. (4:1:3)

Prerequisite: concurrent registration in FamSc 424.

Teaching young children.

424. Kindergarten Practicum. (4:1:3)

Prerequisite: concurrent registration in FamSc 423.

Practice teaching in kindergarten. Fee.

440. Curriculum Development and Implementations. (3:3:0)

Learning settings, learning theory; curriculum development and dissemination for dietetics majors.

460. Theory and Research in Family Sciences. (3:3:0) Prerequisite: FamSc 250, 300.

Analysis of principles used in family science. Emphasis on evidence supporting theories and applications.

461. The Family and the Law. (3:3:0)

Prerequisite: FamSc 160.

Legal environment of the family system, with emphasis on husband-wife and parent-child relationships, rights, and responsibilities.

465. Modifying Family Systems: Principles and Practices. (3:3:0) Prerequisite: FamSc 160 and 210, or instructor's consent.

Analysis of family systems; methods of altering disturbing interaction patterns.

Advanced Undergraduate or Graduate Courses**501R. Workshop in Family Sciences.** (1–2:2:0 ea.) Prerequisite: 8 hours in family sciences or consent of department chair.

Intensive study in applying principles of specified family sciences, subject matter in early childhood education, child development, family relationships, family resource management, or marriage/family therapy.

510. Seminar in Intellectual Development. (3:3:0) Prerequisite: FamSc 514.

Current theories and research on intellectual development.

511. Seminar in Social Development. (3:3:0) Prerequisite: FamSc 514.

Current theories and research on social development, emphasizing positive social development. Play, music, creativity, friendship.

512. Seminar in Emotional Development. (3:3:0)

Current theories and research on emotional development.

513. Seminar in Moral Development. (3:3:0)

Current theories and research on moral development.

514. Seminar in Theories of Human Development. (3:3:0) Prerequisite: FamSc 310.

Intensive investigation of theoretical frameworks, models, and concepts of dominant contemporary theories in child development.

520. Head Teachers Practicum in Preschool. (4:1:3) Prerequisite: FamSc 422 or equivalent classroom experience with young children and instructor's consent.

Head teaching proficiencies: guiding teachers of young children, techniques for involving parents, evaluating student teachers, assessing child performance, review of child guidance, and curriculum development.

521R. Workshop in Home Economics Education. (1–2:Arr:0 ea.) Prerequisite: instructor's consent.**522R. Seminar in Early Childhood Education.** (2:2:4 ea.) Prerequisite: FamSc 422R and instructor's consent.

Teacher skills: developing, applying, measuring, and evaluating effective techniques. Curriculum: selecting, organizing, and creating curriculum materials for young children.

530. Home Economics Education for Adults. (2:2:0) Prerequisite: home economics education background.

Principles, practices, programs, materials, and resources for teaching adults.

540. Family Economics. (3:3:0)

Economic functioning of household; role of income, employment, and household production as determinants of family living level.

545. Family Financial Resource

Management. (3:3:0) Sp; Su even yr.
Prerequisite: FamSc 304 or equivalent.

Applying theories and principles in managing financial resources to meet needs of individuals and families.

555R. Beginning Practicum in Marriage and Family Therapy. (2–3:0:4 ea.) F, W

Prerequisite: FamSc 650.

Introduction to clinical methods and experience in counseling individuals, premarital and marital dyads, and families. For marriage and family therapy majors only.

560. (FamSc-Soc) Contemporary Theories About the Family. (3:3:0)

Contemporary theories and research about the family, emphasizing role, exchange, and systems theories.

561. Seminar in Family Law. (3:3:0)

Prerequisite: concurrent registration in FamSc 461.

Intensive investigation of issues and concepts influencing legal aspects of marriage and family life.

562. Seminar in Professional Responsibility. (3:3:0)

Ethical issues and legal responsibility in professional practice.

563. Theoretical Foundations of Family Systems. (3:3:0)

Systems theory and cybernetic approaches to family processes and epistemological issues.

564. Human and Family Development Over the Life Cycle. (3:3:0)

Interrelationships between individuals and family life cycle development, including modifying family processes and structure over time.

565. Instructional Processes in Family Sciences. (3:3:0)

Methods and curriculum of design, development, implementation, management, and evaluation related to family sciences and home economics curricula.

566R. Practicum in Family Life Education. (1–2:2:6 ea.) Prerequisite: FamSc 565 or instructor's consent.

Supervised experience teaching family living courses in a university setting.

570. Advanced Home Management. (3:3:0) Prerequisite: FamSc 371 or equivalent.

Historical development of home management as a field of study. Theory and research, including family decision making, values, standards, goals.

590R. Readings in Family Sciences. (1–2:2:0 ea.) Prerequisite: FamSc 310 or 460 and instructor's consent.

Discussions and reports of current readings.

595R. Special Topics in Family Sciences. (1–2:2:0 ea.) Prerequisite: for family sciences major, FamSc 310 or 460 and instructor's consent.

Individual study for qualified students.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

600. (FamSc-Soc) Advanced Research Methods. (3:3:0)

601. (FamSc-Soc) Seminar in Survey Research. (3:3:0)

602. (FamSc-Soc) Experimental Design. (3:3:0)

603R. (FamSc-Soc) Research Practicum. (3:1:8 ea.)

604. Ethnographic Research Techniques. (3:3:0)

622R. Advanced Seminar in Early Childhood Education. (2:2:Arr. ea.)

623. History, Theories, and Current Issues in Early Childhood Education. (3:2:2)

640. Marriage and Family Group Therapy. (3:3:0)

645. Analysis and Treatment of Human Sexual Development. (3:3:0)

650. Theoretical Foundations of Marital and Family Therapy. (3:3:0)

651. Psychopathology and Assessment in Marriage and Family Therapy. (3:3:0)

652. Marital and Individual Psychotherapy. (3:3:0)

653. Family and Multigenerational Psychotherapy. (3:3:0)

654. Issues of Gender and Ethnicity. (3:3:0)

655R. Intermediate Practicum in Marriage and Family Therapy. (2–3:0:4–6 ea.)

656. Ethical and Professional Issues for Family Therapists. (3:3:0)

660. (FamSc-Soc) Parent-Child Interaction. (3:1:2)

662. Human Ecology in Developing Countries. (3:3:0)

665. Philosophy in Family Life Education. (3:3:0)

675. Human Resource Allocation and Development. (3:3:0)

676. Organization and Administration of Home Economics Education Programs. (3:3:0)

678. Home Economics Cross-Cultural Field Experience. (1–3:0:0)

689. Theoretical Foundations in Home Economics. (3:3:0)

692R. (FamSc-Soc) Seminar in Family Relationships. (1–3:3:0 ea.)

693R. Independent Readings. (1–3:3:0 ea.)

699R. Master's Thesis. (6–9:Arr.:Arr. ea.)

750R. Supervising Marriage and Family Therapy. (1–2:2:1 ea.)

751. Interactional Observation and Assessment. (3:3:0)

752. Addictions and Family Violence. (3:3:0)

753. Family Therapy with Special Populations. (3:3:0)

755R. Advanced Practicum in Marriage and Family Therapy. (2–3:0:4–6 ea.)

770R. Clinical Internship. (1:1:0 ea.)

791R. Seminar in Human Development. (1–2:Arr.:Arr. ea.)

792R. (FamSc-Soc) Family Symposium. (0.5:1:0 ea.)

793R. Research Seminar in Marriage and Family Therapy. (1–3:Arr.:Arr. ea.)

794R. Special Topics in Child Development. (1–2:2:0 ea.)

799R. Doctoral Dissertation. (1–9:Arr.:Arr. ea.)

Film

See Theatre and Film.

Fine Arts (FnArt)

270R. European Fine Arts. (1–6:Arr.:Arr. ea.) F, W, Sp, Su

Art, design, music, and theatre of host countries and other European cultures.

Finnish

See Germanic and Slavic Languages.

Food Science and Nutrition

Mark J. Rowe, Chair (475 WIDB)

Professors

- Hill, John M. (1971) BA, PhD, Rice U., 1961, 1965.
 Huber, Clayton S., Dean (1976) BS, MS, Utah State U., 1962, 1963; PhD, Purdue U., 1968.
 Johnson, John Hal (1969) BS, MS, Brigham Young U., 1955, 1957; PhD, Ohio State U., 1963.
 Rowe, Mark J. (1987) BS, PhD, Brigham Young U., 1968, 1972.
 Woolley, Bruce H. (1977) BS, U. of Utah, 1965; PharmD, U. of Southern California, 1972.

Associate Professors

- Christensen, Merrill J. (1982) BS, Brigham Young U., 1977; PhD, Massachusetts Inst. of Technology, 1982.
 Franz, Kay B. (1968) BS, U. of California, Berkeley, 1958; MS, Brigham Young U., 1968; PhD, U. of California, Berkeley, 1978.
 Ogden, Lynn V. (1984) BA, MS, Utah State U., 1966, 1967; PhD, U. of Minnesota, 1973.
 Pike, Oscar A. (1986) BS, MS, Brigham Young U., 1980, 1982; PhD, Purdue U., 1986.

Assistant Professors

- Brown, Lora Beth (1983) BS, Iowa State U., 1965; MS, Cornell U., 1967; EdD, Brigham Young U., 1982.
 Nyland, Nora K. (1982) BS, MS, Brigham Young U., 1974, 1981; PhD, Kansas State U., 1989.

Instructors

- McGuire, Diana L. (1988) BS, MS, Brigham Young U., 1974, 1976.
 Todd, Alyce C. (1987) BS Brigham Young U., 1984; MS, U. of Arizona, 1986.

Research Associate

- Purcell, Albert E. (1979) BS, Brigham Young U., 1947; MS, PhD, Purdue U., 1949, 1951.

Part-Time Faculty

- Hicken, Rhonda (1991) BS, Brigham Young U., 1985; MS, U. of Washington, 1989.
 Larsen, Eloise (1979) BS, Brigham Young U., 1955; MS, Arizona State U., 1969.
 Nagy, Judith (1986) BS, MS, Kent State U., 1980, 1981.

Adjunct Faculty

- Anderson, Austin, Bridge, Carlston, Dittfurth, Eliason, Faulk, Hardy, Hawkes, Hunter, Liston, McClellan, Monson, Nielsen, Rackley, Radford, Scott, Short, Thorne, Ware.

Emeriti

- Bates, Winifred W. (1977) BS, Utah State U., 1944; MJ, U. of California, Berkeley, 1965.
 Call, Ara O. (1965) BS, Iowa State U. of Science and Technology, 1933; MS, U. of Wisconsin, Madison, 1944.
 Doxey, Ruth T. Walker (1972) BS, U. of Alberta, Canada, 1941; MS, Washington State U., 1943; PhD, U. of Wisconsin, Madison, 1972.

Turner, Lavell G. W. (1963) BS, Brigham Young U., 1954; MS, U. of Wisconsin, Madison, 1959.

Programs and Degrees

BS Dietetics

Emphases:
 Coordinated Dietetics
 Didactic Dietetics

BS Food Science

BS Molecular Biology

Emphases:
 Food Science
 Nutritional Science
 BS Nutritional Science
 MS Food Science
 MS Molecular Biology (collegewide interdisciplinary degree)
 MS Nutrition

As the world population grows, scientists trained in dietetics, food science, and nutrition will be in great demand. Qualified, intellectually motivated graduates with basic nutrition and food science skills are urgently needed to provide a nutritious, high-quality, and safe diet for the earth's inhabitants.

Premedical-Pre dental

Students can prepare for professional schools with a major in either food science or nutritional sciences.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Food Science and Nutrition

- I. Major courses: FSN 200, 344, 345.
 II. Supporting course: Stat 221.
 III. No more than 3 hours of D credit may be counted toward any major or minor requirements.

Note: Students should contact the department for advisement in their major and the College of Biology and Agriculture Advisement Center to obtain recommendations for General Education courses.

BS Dietetics

This degree provides excellent preparation for the practice of dietetics. Two programs are offered: the coordinated program (combining course work with supervised practice) and the didactic program (course work only). The coordinated program is accredited by the American Dietetic Association (ADA); the didactic program is approved by ADA. The programs are identical for the first five semesters, following which students may

continue in the didactic program or apply for formal admission to the coordinated program, in which enrollment is limited.

Upon acceptance into the coordinated program at the beginning of the junior year, the student follows a rigorous program of supervised practice in health care and food service facilities, coordinated with course work. A student completing the coordinated program is eligible to take the national examination for Registered Dietitian (R.D.) status.

The didactic program consists solely of dietetics course work at the junior and senior level. Following graduation, students must gain acceptance into and complete a nine- to twelve-month dietetic internship or approved practice program to qualify for the national examination for Registered Dietitian (R.D.) status.

I. Core requirements for both emphases in dietetics: FSN 100, 200, 290, 300, 344, 345, 356, 374, 375, 400, 401, 424, 445, 458, 466, 475, 490R.

II. Supporting courses: Math 110; Stat 221; Chem 101, 103, 152, 181 (or 105, 106, 107, 351, 352, 481); Mbio 221; Zool 260, 261, 361; Psych 111; FamSc 440; Acc 200; Soc 323 or 329; FSN 435 or BusM 340.

III. Recommended electives: BusM 300; Mbio 391; FSN 410, 470; Comms 201, 211.

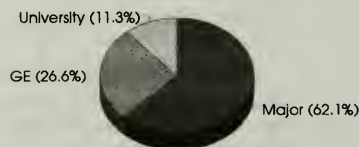
Suggested Sequence of Courses for First Two Years

First Year	F	W	Sp
Chem 101, 103,			
152	3	2	
Math 110	3		
Zool 260, 261		3	4
Psych 111		3	
FSN 100		3	
Second Year			
FSN 290, 200	1, 3		
FSN 344, 345		5	
Mbio 221	3		
Chem 181	3		
Acc 200		3	
Soc 329 or 323		3	
Stat 221			3

Coordinated Dietetics Emphasis

This emphasis includes approximately 1,000 hours of supervised practice as indicated and FSN 357, 451, 463, 467 in addition to above core requirements.

Summary of Degree Requirements for Coordinated Dietetics Emphasis

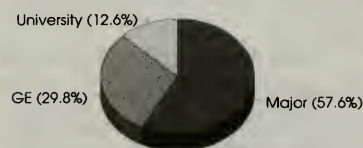


- *Note: Hours do not include any course that could be used to fill GE or university requirements.

Didactic Dietetics Emphasis

After completing this emphasis the student is prepared to enter a dietetic internship or approved practice program that provides practice in administration and clinical dietetics.

Summary of Degree Requirements for Didactic Dietetics Emphasis



1. Total hours 131.0
 2. Major hours* 75.5
 3. General Education requirements 39.0
 Core 15.0
 First-Year Writing 3.0
 Arts and Sciences electives 12.0
 Advanced Math/Foreign Language 6.0
 Advanced Writing 3.0
 4. University requirements 16.5
 Religion 14.0
 PE/Health 2.5
 5. Elective hours 0.0

6. 40 hours upper-division GPA requirement of 2.0
 7. Estimated semesters to graduate
 13 hours per semester 10.0
 16 hours per semester 8.0
 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

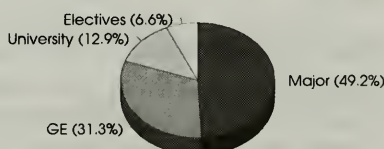
*Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Food Science

Food science is the application of chemistry, microbiology, and engineering to the production, processing, distribution, evaluation, and use of food. The many facets of food science—research, product development, processing, packaging, quality assurance, and marketing—create unique and challenging opportunities in industry, academia, and government. The food science curriculum is approved by the Institute of Food Technologists.

- I. Core requirements: FSN 191, 200, 344, 345, 350, 362, 450, 461, 465.
 II. Supporting courses: Math 112, 113; Stat 221; Chem 105, 106, 107, 181, 351, 352, 353; Mbio 221, 222, 361; Phscs 105; Comms 150.
 III. Recommended electives (chosen after consultation with an advisor): Econ 110, Chem 223, AgHrt 240, FSN 360, 462.

Summary of Degree Requirements for BS Food Science



1. Total hours 128.0
 2. Major hours* 63.0
 3. General Education requirements 40.0
 Core 15.0
 First-Year Writing 3.0
 Arts and Sciences electives 13.0
 Advanced Math/Foreign Language 6.0
 Advanced Writing 3.0
 4. University requirements 16.5
 Religion 14.0
 PE/Health 2.5
 5. Elective hours 8.5
 6. 40 hours upper-division GPA requirement of 2.0
 7. Estimated semesters to graduate
 13 hours per semester 10.0
 16 hours per semester 8.0
 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses for First Year

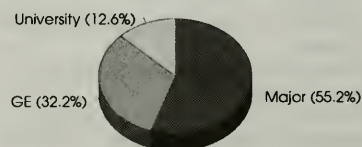
	F	W
Chem 105, 106, 107	4	4
Math 110, 111	3	2
Phscs 105		3
FSN 191	1	

BS Molecular Biology in Food Science

This program is for the student who desires to apply the tools of molecular biology to the development, processing, or quality assurance of foods. Challenging opportunities await skilled people on the interface of these two fields. This program is excellent preparation for advanced degrees.

- I. Core requirements: FSN 200, 344, 345, 350, 362, 450, 461, 465.
 II. Supporting courses: Math 112, 113; Phscs 105, 106, 107, 108 (or 121, 122, 221); Chem 105, 106, 107, 351, 352, 353, 481; Biol 130; Botny-Mcbio-Zool 341, 342; Mbio 221, 361, 441, 442.
 III. Recommended electives: Botny-Mcbio-Zool 343; Chem 367; Mbio 351.

Summary of Degree Requirements for BS Molecular Biology in Food Science



1. Total hours 130.5
 2. Major hours* 72.0
 3. General Education requirements 42.0
 Core 16.0
 First-Year Writing 3.0
 Arts and Sciences electives 13.0
 Advanced Math/Foreign Language 7.0
 Advanced Writing 3.0
 4. University requirements 16.5
 Religion 14.0
 PE/Health 2.5
 5. Elective hours 0.0
 6. 40 hours upper-division GPA requirement of 2.0
 7. Estimated semesters to graduate
 13 hours per semester 10.0
 16 hours per semester 8.0
 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses for First Year

	F	W
Chem 105, 106, 107	4	4
Math 112, 113	4	4
Biol 130		4

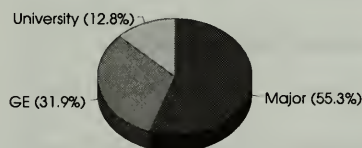
BS Molecular Biology in Nutritional Science

Excellent preparation for advanced degrees, this program is for the student who desires to apply the tools of molecular biology to an understanding of nutrient action.

I. Core requirements: FSN 100, 200, 300, 344, 345, 435, 494R.

II. Supporting courses: Math 112, 113; Phscs 105, 106, 107, 108 (or 121, 122, 221); Chem 105, 106, 107, 351, 352, 353, 481; Biol 130; Botny-Mcbio-Zool 341, 342; Mcbio 221, 441, 442; Zool 460.

III. Recommended electives: Botny-Mcbio-Zool 343; Chem 367.

Summary of Degree Requirements for BS Molecular Biology in Nutritional Science

1. Total hours	128.5
2. Major hours ♦	71.0
3. General Education requirements	41.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses for First Year

	F	W
Chem 105, 106, 107	4	4
Math 112, 113	4	4
FSN 100	3	
Biol 130		4

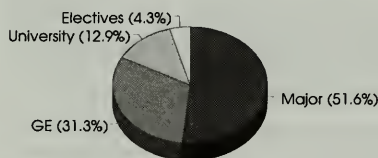
BS Nutritional Science

This degree provides excellent preparation for those individuals in preprofessional programs (e.g., premedicine, predentistry, prelaw) or for an advanced degree (MS, PhD) in nutrition or biological sciences.

I. Core requirements: FSN 100, 200, 300, 344, 345, 435, 494R, and (after consultation with an advisor) 8 credit hours from FSN 350, 356, 400, 410, 424, 492, or any 500-series or above nutrition course; Mcbio 391, 541; Chem 582, 584; Botny-Mcbio-Zool 341, 342; Zool 461, 565; Hlth 578.

II. Supporting courses: Chem 105, 106, 107, 351, 352, 353, 481; Math 110, 111, 119 (or 112, 113); Stat 221; Phscs 105, 106, 107, 108 (or 121, 122); Biol 130; Mcbio 221; Zool 460.

III. Recommended electives: Chem 223, Zool 380, Botny-Mcbio-Zool 343.

Summary of Degree Requirements for BS Nutritional Science

1. Total hours	128.0
2. Major hours ♦	66.0
3. General Education requirements	40.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	5.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses for First Year

	F	W
Chem 105, 106, 107	4	4
Math 110, 111	3	2
Biol 130		4
Mcbio 221		3
FSN 100	3	

Minor

A minor in food science and nutrition consists of FSN 100, 200, 344, 345, and 6 additional credits from 300-series (or higher) courses.

Food Science and Nutrition (FSN)**Undergraduate Courses**

100. Essentials of Human Nutrition 1. (3:3:0) F, W, Sp, Su

Food-oriented study of nutrition facts and principles as a basis for dietary choices; consequences of choices; scientifically examining controversial topics.

191. Introduction to Food Science. (1:1:0) F

Guest lectures and exposure to vocations in food science.

200. Essentials of Human Nutrition 2. (3:3:0) F, Sp

Prerequisite: FSN 100 and organic chemistry, or Chem 351 concurrently.

Nutrient-oriented study of nutrition facts and principles; metabolic consequences of nutrient intakes; techniques of communicating valid nutrition concepts.

290. Introduction to Dietetics. (1:1:0) F

Guest lectures and introduction to specialties in dietetics.

300. Clinical Nutrition 1. (4:4:0) F

Prerequisite: FSN 200, physiology, biochemistry, and FSN major.

Nutritional assessment and dietary modification for treatment of disease states.

310. International Nutrition Issues. (2:2:0) F

Problems, program development, administration, and evaluation.

+Animal Science 328. Meat Processing Methods. (2:1:3)

344. Introduction to Food Chemistry. (3:3:0) F, W

Prerequisite: Mcbio 221; organic chemistry; and concurrent registration in FSN 345.

Chemical and physical properties of foods relative to preparation and processing.

345. Introduction to Food Chemistry Laboratory. (2:0:6) F, W

Prerequisite: concurrent registration in FSN 344.

350. Food Analysis. (4:2:6) F Prerequisite: Chem 351, 352; FSN 344.

Principles, methods, and instrumentation involved in physical and chemical analysis of raw and processed foods.

356. Clinical Nutrition 2. (3:3:0) F, W

Prerequisite: FSN 300 and instructor's consent.

Nutrition in the life cycle, critical care assessment, intervention, and evaluation.

357. Clinical Nutrition Laboratory A. (2:0:8) F, W Prerequisite: FSN 300 and concurrent registration in 356.

Dietary interviewing and education; planning, implementing, and evaluating dietary modification for hospitalized patients.

360. Techniques for Sensory Evaluation. (3:2:3) F Prerequisite: Stat 221, FSN 344.

Basic principles and practical techniques for sensory evaluation; planning and executing sensory experiments.

+Microbiology 361. Food and Dairy Microbiology. (3:2:3)

362. Food Commodity Processing. (4:3:3) F Prerequisite: FSN 344, 345.

Post-harvest characteristics and physiology of raw food commodities. Processing characteristics of each commodity, including cereals, fruits, vegetables, eggs, meats, and milk.

374. Quantity Food Production and Service. (2:2:0) F, W Prerequisite: FSN 200, 344, 345.

Processes and techniques of quantity food production for commercial and institutional food systems.

375. Quantity Food Production and Service Laboratory. (1–2:0:8) F, W Prerequisite: FSN 374 or concurrent registration.

399R. Cooperative Education. (1–9:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: instructor's consent.

On-the-job experience.

400. Community Nutrition. (3:3:4) F Prerequisite: FSN 300 or instructor's consent.

Public health nutrition applied to community programs.

401. Community Nutrition Fieldwork. (0.5–1:0:2–4) F Prerequisite: FSN 300 and concurrent registration in 400.

Experience in public health and community nutrition programs.

410. Sports Nutrition. (2:2:0) W Prerequisite: FSN 100.

Basic principles and practical applications for physical education and athletics.

424. Nutrition in Growth and Development. (2:2:0) W Prerequisite: FSN 300 or instructor's consent.

Nutrition during pregnancy, lactation, early infancy, and childhood.

435. Essentials of Human Nutrition 3. (4:4:0) F Prerequisite: FSN 200; Zool 361 or 460; biochemistry or equivalent.

Metabolic interrelationships among nutrients.

445. Food Service Systems. (3:3:0) W Prerequisite: FSN 374.

Input, transformation, and output in the food service system; emphasizes procurement, production, service, and sanitation.

450. Food Chemistry. (4:4:0) W Prerequisite: FSN 344, 345.

Chemistry of chief components of food and effects of processing and storage on them.

451. Clinical Nutrition Laboratory B. (2:0:8) F Prerequisite: FSN 356, 357.

Application of skills in evaluating nutritional status of hospitalized patients; enteral and parenteral feeding; patient education; medical record documentation.

458. Management in Dietetics. (3:3:0) F Prerequisite: FSN 445, 463.

Management cycle and theory applied to clinical and administrative dietetics.

459. Clinical Pharmacology. (2:2:0) F Prerequisite: biochemistry, Zool 361, or equivalent.

Overview of pharmacological principles of therapeutics as applied to clinically significant pathophysiological states.

461. Food Process Engineering. (4:3:3) W Prerequisite: FSN 344, 345; Phscs 105.

Principles of fluid statics, fluid dynamics, heat transfer and psychromatics; unit operations including thermal processing, frying, irradiation, refrigeration, freezing, and dehydration in food processing.

462. Food Regulations and Quality Assurance. (2:2:0) W Prerequisite: FSN 344, 345; Stat 221.

Federal food regulations and methods used in quality assurance during commercial food production.

463. Administrative Practicum (5:3:Arr.) Sp, Su Prerequisite: FSN 374, 375.

Experience in food service.

465. New Food Product Development. (3:1:6) F Prerequisite: FSN 344 or equivalent.

Ingredients and methods used to develop new foods.

466. Advanced Dietetics Practice. (3:3:0) W Prerequisite: FSN 356, 445.

Skills development in clinical and administrative dietetics emphasizing critical care nutrition and financial control in food service.

467. Advanced Dietetics Practice Laboratory. (6:0:32) W Prerequisite: FSN 451, 463; and concurrent registration in 466.

Advanced skill development in clinical and administrative dietetics.

470. Herbs: Facts and Fallacies. (2:2:0) F Prerequisite: a chemistry course.

Objective analysis of therapeutic and nutritional claims made for herbs and natural products. Pharmacological, nutritional, and medical viewpoints explored.

475. Research Methods in Dietetics. (4:2:Arr.) W Prerequisite: FSN 458.

Research techniques in food service management.

+Chemistry 481. Biochemistry. (4:4:0)

490R. Seminar. (2:2:0 ea.) W Prerequisite: 10 credit hours in food science and nutrition or instructor's consent.

492. Fieldwork in Food Science and Nutrition. (1–8:0:24) Sp Prerequisite: 12–15 credit hours in FSN and instructor's consent.

494R. Special Problems in Food Science and Nutrition. (1–3:0:9 ea.) F, W, Sp, Su Independent Study Also. Prerequisite: instructor's consent and department chair; 14 hours of food science and nutrition courses. Individual study for qualified students.

Advanced Undergraduate or Graduate Courses

531. Advanced Human Nutrition 1. (3:3:0) F Prerequisite: FSN 435 or equivalent.

Nutritional status and basis of recommendations for carbohydrates, lipids, protein, and energy.

532. Advanced Human Nutrition 2. (3:3:0) W Prerequisite: FSN 435 or equivalent.

Nutritional status and basis of recommendations for vitamins, minerals, and water.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

631R. Selected Topics in Food Science and Nutrition. (1–3:3:0 ea.)

638. Advanced Clinical Nutrition. (4:4:0)

639. Advanced Public Health Nutrition. (3:3:0)

652. Carbohydrates and Their Reactions in Foods. (3:3:0)

654. Proteins and Their Reactions in Foods. (3:3:0)

656. Food Lipids and Their Reactions in Foods. (3:3:0)

691R. Graduate Seminar. (1–2:2:0 ea.)

697R. Research. (1–3:Arr.:Arr. ea.)

699R. Master's Thesis. (1–9:Arr.:Arr. ea.)

French and Italian

Madison U. Sowell, Chair (4002JKHB)

Professors

Brown, Thomas H. (1960) BA, Brigham Young U., 1955; MA, PhD, U. of Illinois, 1957, 1960.

Sowell, Madison U. (1979) BA, Brigham Young U., 1975; MA, PhD, Harvard U., 1976, 1979.

Turner, Norman C. (1970) BA, MA, Brigham Young U., 1957, 1958; PhD, Syracuse U., 1962.

Senior Lecturers

Noble, Cinzia D. (1980) BA, Brigham Young U., 1978; Dott. in Lett., G. D'Annunzio, Italy, 1979.

Thompson, Chantal P. (1973) BA, U. of Rennes, France, 1968; BA, MA, Brigham Young U., 1970, 1972.

Associate Professors

Bush, Michael D. (1992) BA, Brigham Young U., 1972; MBA, U. of Missouri, 1976; PhD, Ohio State U., 1983.

Lambert, L. Gary (1969) BA, U. of California, Berkeley, 1963; MA, U. of California, Santa Barbara, 1965; PhD, Rice U., 1969.

Slade, J. Keith (1963) BA, U. of Arizona, 1959; MA, Brigham Young U., 1960.

Assistant Professors

Bell, Mark E. (1991) BA, Brigham Young U., 1976; MPhil, U. of Birmingham, England, 1989; PhD, U. of Utah, 1991.

Comollo, Adriano (1989) Dott. in Fil., Università di Torino, Italy, 1981; MA, PhD, U. of Wisconsin, Madison, 1986, 1989.

Cottle, Michaela V. (1989) BA, Brigham Young U., 1977; MA, U. of North Carolina, Chapel Hill, 1985.

LeBras, Yvon R. (1993) BA, MA, U. of Rennes, France, 1970, 1972; MA, Brigham Young U., 1972; PhD, Laval U., Canada, 1992.

Unlandt, Nicolaas G. W. (1990) BA, MA, DLitt, U. of Amsterdam, Holland, 1983, 1985, 1992.

Emeriti

Ashford, Josette B. (1969) BA, PhD, Brigham Young U., 1967, 1972.

Green, John A. (1964) BA, MA, Brigham Young U., 1954, 1955; PhD, U. of Washington, 1960.

Jensen, Don C. (1963) BA, MA, Brigham Young U., 1960, 1963; PhD, U. of Minnesota, Minneapolis, 1972.

Kimball, M. Douglas (1967) BA, MA, U. of Utah, 1953, 1964; PhD, Brigham Young U., 1970.

Programs and Degrees

BA	French
BA	Honors in French and University Honors
BA	French Teaching
BA	Italian
BA	Honors in Italian and University Honors
MA	French Studies
MA	Language Acquisition (French)

The French and Italian languages are valuable research and communication tools for students in music, art, history, European Studies, international relations, library science, and comparative literature. Many have chosen a major or minor in French or Italian in addition to a second major or minor in areas such as accounting, business education, or business management, or in preparation for professional programs such as the master of public administration, master of business administration, master of

organizational behavior, dentistry, law, or medicine.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Language Credit by Examination

See policy in College of Humanities' Language Credit by Examination section of this catalog.

Advisement

The faculty welcome and strongly encourage consultation regarding curriculum questions and career decisions from majors and minors (and from those contemplating majors or minors). Questions relating to changing of majors, General Education, ABC Reports, and graduation clearance should be directed to the college advisement center (3078 JKH).

Internships Abroad

Eight-week summer work abroad is available in France, Belgium, and Switzerland, where interns receive financial compensation while performing such services as clerking in grocery and department stores, doing accounting in banks, and serving as *au pairs*. Students may enroll for cooperative education credit (199R, 299R, or 399R) and conversation credit (211R, 311R, or 411). The internship proves invaluable in strengthening language skills.

Oral Proficiency Interview

All *majors* and *teaching minors* are required to enroll in Fren 491 or Ital 491 and have an oral proficiency interview (OPI) during the senior year. The results of the OPI are recorded on the student's transcript. (An interview is optional for departmental minors.) The desired rating is *Advanced*. To allow adequate time to improve the proficiency rating, students may request a pretest evaluation during the first semester of the junior year. Appointments for the interviews are made through the department secretary.

When it is necessary to strengthen oral proficiency, students are offered various opportunities: conversation courses, campus language houses, Study Abroad programs, summer internships abroad, and support materials in the Humanities Learning Resource Center, such as tapes, videos, and satellite broadcasts.

Instruction

All courses are taught in the target language unless indicated otherwise in this catalog.

French**Accelerated and Intensive Programs**

1. Beginning: The department offers an accelerated course in beginning French

(101 and 102) every fall and winter semester. These courses are offered on the block.

2. Intermediate: Students who have taken Fren 101 and 102 or their equivalent may enroll for 9 hours (201, 202, 211R) of intensive intermediate language during a 2-hour block fall or winter semester. Majors and minors are urged to enroll in this program.

Foreign Language Student Residence

An excellent alternative to or preparation for foreign residency is offered through the Foreign Language Student Residence, where participants speak, eat, and live with a *French only* rule. This program, with numerous cultural opportunities, is available each semester to women and men who have completed at least one year of college French. Residents may also receive 2 hours of conversation credit per semester.

Study Abroad Programs

All students of French are encouraged to participate in a Study Abroad program. Study Abroad typically offers a French Intensive Program in conjunction with Laval University Summer School in Quebec City, Canada, or a culture and civilization program in Paris, France. Both provide excellent opportunities for developing language proficiency and better understanding of the history and culture of French-speaking countries.

Minor Required for French Majors*

Option 1: Complete a minor in another department as defined by that department. A minor may be selected to fit individual needs and interests after consultation with an advisor in the Department of French and Italian. (Minors for those who seek teaching certification must be chosen from the areas approved by the Education Advisement Center.)

Option 2: Complete at least 15 hours of course work in areas approved by the major advisor. Courses must be approved before the senior year.

*All teaching majors are required to work under Option 1.

Program Requirements**Core Requirements for All Degree Programs in French**

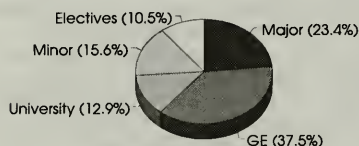
- I. Fren 301, 321, 322, 326, 445, 446.
- II. No D credit in major or minor courses will be accepted.
- III. Residency: At least half of the major hours must be taken on the Provo campus.

BA French

I. In addition to above core requirements:
Four courses from Fren 439, 441, 442, 443, 444, 495R.

II. Department majors are required to enroll in Fren 491 and have an oral proficiency interview (OPI) their senior year (the last semester before graduating). The rating of the OPI will be recorded on the student's transcript. The minimum desired OPI rating is *Advanced*.

Summary of Degree Requirements for BA French



1. Total hours	128.0
2. Major hours*	30.0
3. General Education requirements	48.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0–15.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Required minor	20.0
Electives	13.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in French and University Honors

- I. Honors Program requirements:
 - A. The Honors General Education graduation requirements as listed in the Honors Education section of this catalog.
 - B. General Education. Of Arts and Sciences courses remaining after Honors core, two must be in Honors sections.

II. Honors major requirements: Students must make the following adjustments in non-Honors major requirements:

- A. Honors major reading list (criticism, history, additional literary readings).

- B. Twenty-page research paper in each 400-level course on topic approved by instructor.
- C. Additional consultation in each 400-level course to discuss readings from Honors reading list pertaining to course of study and required research paper.
- D. Residency abroad (mission, Study Abroad) or a semester in the Foreign Language Student Residence.
- E. Honors thesis (Fren 499R, 3 hours minimum), which may be extension of one of research papers; oral defense of thesis; and examination on Honors "Masterworks of Art and Literature."

BA French Teaching

The requirements for the teaching major and minor in French are found in the Secondary Education section of this catalog.

French Minor

The preceding core requirements constitute a French minor.

Minor hours req.: 18

French (Fren)

Undergraduate Courses

101. First-Year French, Part 1. (4:5:2)

Development of the four language skills: understanding, speaking, reading, and writing.

102. First-Year French, Part 2. (4:5:2)

Prerequisite: Fren 101 or equivalent.

Continuation of French 101.

121. Intensive Reading in French. (4:4:0) For students with little or no French.

Reading for research purposes, including reading skills in area of student's specialization or interest. Graduate students will be graded pass/fail. Undergraduates will receive letter grades. Conducted in English.

122. Intensive Reading in French. (4:4:0)

Prerequisite: Fren 121.

Continuation of French 121.

201. Intermediate French, Part 1. (4:5:2)

Independent Study also. Prerequisite: Fren 102 or equivalent.

Reading, writing, conversation, vocabulary building, and review of grammar.

202. Intermediate French, Part 2. (3:3:0)

Prerequisite: Fren 201 or equivalent.

Final course for GE Foreign Language requirement (except for returned missionaries); extensive reading in French literature and culture.

211R. Second-Year Conversation.

(1–3:Arr:Arr. ea.) Prerequisite: Fren 102 or equivalent. May be taken concurrently with Fren 201.

217. (Fren-Ital) French and Italian Cinema. (3:3:2)

Background for understanding and appreciating the best of motion picture art in France and Italy. Language of instruction is English; no knowledge of French or Italian required.

301. Introduction to Literary Analysis.

(3:3:0) Prerequisite: Fren 202 or equivalent.

How to read French prose, drama, and poetry and apply methods of literary criticism. Prerequisite to all 400-level courses. Final course for GE Foreign Language requirement for returned missionaries.

311R. Third-Year Conversation.

(1–3:Arr:Arr. ea.) Prerequisite: Fren 211R or instructor's consent. May be taken concurrently with 301.

321. Advanced Grammar. (3:3:0)

Prerequisite: Fren 202 or equivalent.

Systematic review of French grammar and syntax.

322. Advanced Composition. (3:3:0)

Prerequisite: Fren 321.

Expository writing (narration, description, dialogue, explication de texte, etc.).

326. French Phonetics and Pronunciation.

(3:3:2) Prerequisite: Fren 301, 321.

Theoretical and practical phonetics.

345. Francophone Culture. (3:1:3)

Prerequisite: Fren 102 or equivalent.

Study Abroad only.

377. French Language Teaching Procedures.

(3:3:2) Prerequisite: Fren 321, 326, 445 or 446; ScEd 276R for students planning to certify. (Prospective teachers are advised to take Fren 377 as near the end of their major course work as possible and just before student teaching.)

Mastery of teaching skills specific to foreign language instruction. Lectures, demonstrations, practice in instruction. Conducted in French and English.

399R. Cooperative Education: French Language Field Experience. (1–6:0:0 ea.)

Prerequisite: consent of program coordinator.

On-the-job experience in French.

411. Fourth-Year Conversation. (2:2:1)

Prerequisite: Fren 311R or equivalent.

429. French Syntax and Morphology. (3:3:0)

Prerequisite: Fren 321, 322, or equivalent.

Structure of French language: a pedagogical approach for prospective teachers.

439. Francophone Literature. (3:3:0)

Prerequisite: Fren 301 or equivalent.

Readings from major twentieth-century French writers outside France, e.g., Canada, the Caribbean, and Africa.

441. French Literature—Middle Ages and Sixteenth Century. (3:3:0) Prerequisite: Fren 301 or equivalent.

Readings in hagiography, epic, romance, contes, fabliaux, lais, and lyric poetry.

442. French Literature—Seventeenth and Eighteenth Centuries. (3:3:0) Prerequisite: Fren 301 or equivalent.

Origins and concept of French classicism and development of "Movement Philosophique."

443. French Literature of the Nineteenth Century. (3:3:0) Prerequisite: Fren 301 or equivalent.

Significant literary movements (romanticism, symbolism, realism, and naturalism) that shaped poetry, the novel, and theatre during the nineteenth century.

444. French Literature of the Twentieth Century. (3:3:0) Prerequisite: Fren 301 or equivalent.

Readings in the modern novel, existentialism, theatre of the absurd, and the nouveau roman.

445. French Civilization from the Beginning to 1589. (3:3:0) Prerequisite: Fren 301 or instructor's consent.

Historical survey of institutions, fine arts, and social conditions to the advent of Henri IV.

446. French Civilization from 1589 to the Present. (3:3:0) Prerequisite: Fren 301 or instructor's consent.

Historical survey of institutions, fine arts, and social conditions.

490R. Individual Study in French.

(1-3:Arr.:Arr. ea.) Prerequisite: instructor's consent.

Assignments to fit exceptional major or minor needs, but otherwise not accepted for major.

491. Senior Oral Proficiency Evaluation. (0:0:0)

Required of all majors and teaching minors during the senior year.

495R. Senior Seminar in French. (3:3:0) Prerequisite: Fren 301 or instructor's consent.

In-depth study of a limited area of literature, language, or criticism; content varies; requires research and writing.

499R. Honors Thesis. (1-6:0:0 ea.)

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

670R. Tutorial Internship in French. (3:0:0 ea.)

680R. Special Studies in French. (1-3:0:0 ea.)

690R. Seminar in French. (3:0:0 ea.)

699R. Master's Thesis. (1-6:0:0 ea.)

Italian

Foreign Language Student Residence

In addition to BYU's spring or summer term in Italy, intensive "live-in" experience is

available in the Foreign Language Student Residence. Besides taking regular courses in the department, students participate in lectures, discussions, films, and related extracurricular activities under the supervision of native Italian head residents. Vital to the success of the program is the 24-hour *Italian only* rule whereby students use Italian language as their only means of communication while they are at home. Participants may receive 2 credit hours per semester.

Study Abroad Program

All students of Italian are encouraged to participate in a Study Abroad program in Italy offered spring or summer term (usually every other year). This program provides excellent opportunities for developing language proficiency and understanding the rich culture of Italy.

Program Requirements

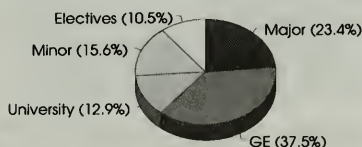
Core Requirements for All Degree Programs in Italian

- I. Ital 301, 321, 322, 326.
- II. No D credit in major or minor courses will be accepted.
- III. Residency: At least half of the major hours must be taken on the Provo campus.

BA Italian

- I. In addition to above core requirements: Six courses from Ital 441, 442, 443, 444, 445, 446, 460, 495R (18 hours).
- II. Majors are required to enroll in Ital 491 and have an oral proficiency interview (OPI) their senior year (last semester before graduating). The rating will be recorded on the student's transcript. The minimum desired OPI rating is *Advanced*. Where necessary to strengthen oral proficiency, students are offered conversation courses (211R, 311R, 411), the Foreign Language Student Residence, Study Abroad programs, and support materials in the Humanities Learning Resource Center.

Summary of Degree Requirements for BA Italian



- | | |
|-----------------------------------|-------|
| 1. Total hours | 128.0 |
| 2. Major hours* | 30.0 |
| 3. General Education requirements | 48.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |

Advanced Math/Foreign Language	0-15.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Required minor	20.0
Electives	13.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in Italian and University Honors

- I. Honors Program requirements:
 - A. The Honors General Education graduation requirements as listed in the Honors Education section of this catalog.
 - B. General Education: Of Arts and Sciences courses remaining after Honors core, two must be in Honors sections.
- II. Honors major requirements. Students must make the following adjustments in non-Honors major requirements:
 - A. Honors major reading list (criticism, history, additional literary readings).
 - B. Twenty-page research paper in each 400-level course on topic approved by instructor.
 - C. Additional consultation in each 400-level course to discuss readings from Honors reading list pertaining to course of study and required research paper.
 - D. Residency abroad (mission, Study Abroad) or a semester in the Foreign Language Student Residence.
 - E. Honors thesis (Ital 499R, 3 hours minimum), which may be extension of one of research papers; oral defense of thesis; and examination on Honors "Masterworks of Art and Literature".

Minors Required for Italian Majors

Option 1: Complete a minor as described by the minor department.

Option 2: Majors need not have a formal minor, but they must complete at least 15 hours in areas approved by the major advisor. Courses must be approved before the senior year.

Note: No teaching major or teaching minor is available in Italian.

Italian Minor

In addition to above core requirements: Two courses from Ital 441, 442, 443, 444, 445, 446, 460, 495R.

Minor hours req.: 18

Italian (Ital)

Undergraduate Courses

101. First-Year Italian, Part 1. (4:5:2)

Daily development of the four language skills: understanding, speaking, reading, and writing.

102. First-Year Italian, Part 2. (4:5:2)

Prerequisite: Ital 101 or equivalent.
Continuation of Ital 101.

201. Intermediate Italian 1. (4:5:1)

Prerequisite: Ital 102 or two years of high school Italian or equivalent.

Reading, writing, conversation, vocabulary building, and review of grammar.

202. Intermediate Italian 2. (3:3:0)

Final course for GE Foreign Language requirement (except for returned missionaries); extensive reading in Italian literature and culture.

211R. Second-Year Conversation.

(1-3:Arr.:Arr. ea.) Prerequisite: Ital 102 or equivalent. May be taken concurrently with Ital 201.

217. (Fren-Ital) French and Italian Cinema. (3:3:2)

Background for understanding and appreciating the best of motion picture art in France and Italy. Language of instruction is English; no knowledge of French or Italian required.

301. Introduction to Italian Literature. (3:3:0)

Prerequisite: Ital 201 or equivalent.
Basic literary concepts and terms coupled with readings of Italian works from various genres and periods. Prerequisite to study in most advanced literature courses in Italian. Final course for GE Foreign Language requirement for returned missionaries.

311R. Third-Year Conversation.

(1-3:Arr.:Arr. ea.) Prerequisite: Ital 211R or instructor's consent. May be taken concurrently with Ital 301.

321. Advanced Grammar. (3:3:0)

Prerequisite: Ital 201 or equivalent. May be taken concurrently with Ital 301.

Intensive review of grammar; vocabulary building.

322. Advanced Composition. (3:3:0)

Prerequisite: Ital 321 or equivalent.
Italian syntax and composition.

326. Italian Phonetics and Pronunciation.

(3:3:0) Prerequisite: Ital 321 or equivalent.
General rules of pronunciation.
Introduction to history of Italian language.

399R. Cooperative Education: Italian Language Field Experience. (1-6:0:0 ea.)

Prerequisite: consent of program coordinator.
On-the-job experience in Italian.

411. Fourth-Year Conversation. (2:2:0)

Prerequisite: residency in the Foreign Language Student Residence.

441. Italian Literature of the Late Middle Ages and Renaissance. (3:3:0) Prerequisite: Ital 301 or equivalent.

442. Italian Literature of the Baroque and Enlightenment Periods. (3:3:0) Prerequisite: Ital 301 or equivalent.

443. Italian Literature of the Romantic Period. (3:3:0) Prerequisite: Ital 301 or equivalent.

444. Italian Literature of the Twentieth Century. (3:3:0) Prerequisite: Ital 301 or equivalent.

445. Italian Civilization from the Beginning to 1600. (3:3:0) Prerequisite: Ital 301 or equivalent.

Survey of institutions, fine arts, and great writers that shaped the history of Italy from the barbarian invasions through the Renaissance.

446. Italian Civilization from 1600 to the Modern Era. (3:3:0) Prerequisite: Ital 301 or equivalent.

Survey of institutions, fine arts, and great writers that shaped the history of Italy from the Baroque period to the modern era.

460. Dante's *Divine Comedy*. (3:3:0)

Intensive examination of Dante's major opus. Lectures in English with bilingual text. Italian majors and minors must read the work in the original for credit.

490R. Individual Study in Italian.

(1-3:Arr.:Arr. ea.) Prerequisite: instructor's consent.

Assignments to fit individual needs of the advanced student. Not accepted for major.

491. Senior Oral Proficiency Evaluation. (0:0:0)

Required of all majors during the senior year.

495R. Senior Seminar in Italian. (3:3:0)

Prerequisite: Ital 301 or instructor's consent.

In-depth study of a limited area of literature, language, or criticism; content varies; requires research and writing.

499R. Honors Thesis. (1-6:0:0 ea.)

Graduate Degree Course

See the 1993-94 BYU Graduate Studies Catalog.

699R. Master's Thesis. (1-6:0:0 ea.)

Genealogy

See History and Church History and Doctrine.

Geography

Dale J. Stevens, Chair (690-C SWKT)

Professors

Grey, Alan H. (1964) BA, Brigham Young U., 1959; MA, PhD, U. of Wisconsin, Madison, 1960, 1963.

Hudman, Lloyd E. (1970) BS, U. of Utah, 1964; MS, PhD, U. of Kansas, 1968, 1970.

Jackson, Richard H., Associate Dean (1969) BS, MS, Brigham Young U., 1965, 1966; PhD, Clark U., 1970.

Stevens, Dale J. (1966) AA, Weber State Coll., 1956; BA, Brigham Young U., 1961; MA, Indiana U., Bloomington, 1963; PhD, U. of California, Los Angeles, 1969.

Associate Professor

Hinckley, Thomas K. (1972) BA, Brigham Young U., 1958; MA, U. of Pittsburgh, 1960; PhD, U. of Western Ontario, Canada, 1979.

Assistant Professors

Davis, James A. (1990) BS, Brigham Young U., 1978; MA, California State U., Fullerton, 1987; PhD, Arizona State U., 1993.

Emmett, Chad F. (1992) BA, Utah State U., 1979; MA, Brigham Young U., 1983; PhD, U. of Chicago, 1991.

Hardin, Perry (1988) BS, MA, Brigham Young U., 1982, 1984; PhD, U. of Utah, 1989.

Shumway, J. Matthew (1991) BS, MA, Brigham Young U., 1984, 1987; PhD, Indiana U., Bloomington, 1991.

Emeriti

Horiuchi, Russell N. (1961) BA, Brigham Young U., 1953; MA, U. of California, Berkeley, 1958; PhD, U. of Washington, 1975.

Layton, Robert L. (1954) BS, MS, U. of Utah, 1951, 1952; PhD, Syracuse U., 1962.

Programs and Degrees

BS Cartography and Geographic Information Systems

BS Geography

BS Geography Teaching

BS Planning and Resource Management

BS Travel and Tourism

MS Geography

Emphases:

Cartography

Geography

Planning

Geography offers a variety of programs centered around spatial analysis and tailored, so far as possible, to meet the

future needs of individual students. Graduates are employed in a wide range of both private and governmental positions. Job titles include geographer, teacher of geography, city or regional planner, cartographer, photo interpreter, intelligence specialist, travel agent, environmental specialist, commodities and industrial location analysts, and many others. Our modern computer laboratory allows students to gain practical experience with geographical information systems (GIS), cartography, and other programs in planning, urban, travel, and population studies. Skills in spatial analysis make geography a valuable minor or supporting field for many other disciplines. Interested students should consult with a departmental advisor early in their program to declare any special interests, intentions, or areas of focus.

Only three D credits are allowed in major programs.

Graduate Programs

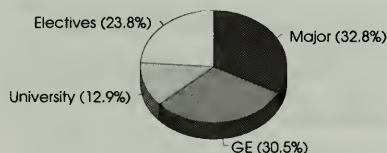
See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

BS Cartography and Geographic Information Systems

- I. Geog 101, 120, 211, 212, 221, 222, 312, 412, 499, 513, 515; Soc 205 or equivalent.
- II. Three courses (8 credit hours) from Geog 313, 430, 512, 517.
- III. Two courses (5 credit hours) from Geog 302, 310, 331, 341, 401, 405, 450, 455, 460, 465, 470, 471, 480, 485.

Summary of Degree Requirements for BS Cartography and Geographic Information Systems



- | | |
|---|-------|
| 1. Total hours | 128.0 |
| 2. Major hours* | 42.0 |
| 3. General Education requirements | 39.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 6.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 30.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |

7. Estimated semesters to graduate

13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

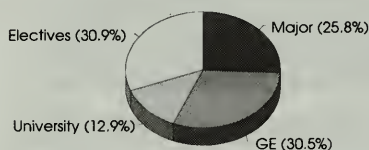
Cartography Minor

This minor is designed for study interest in cartography, remote sensing, and GIS (17–18 hours): Geog 211, 212, and 13 hours from 312, 313, 412, 512, 513, 515, 517.

BS Geography

- I. Geog 101, 120, 211, 212, 221, 222, 301, 331, 450, 499, 515; Soc 205 or equivalent.
- II. 10 or more elective hours in geography selected in consultation with advisor.

Summary of Degree Requirements for BS Geography



- | | | | | | |
|---|-----------------------|------|-----------------------|-----|--|
| 1. Total hours | 128.0 | | | | |
| 2. Major hours* | 33.0 | | | | |
| 3. General Education requirements | 39.0 | | | | |
| Core | 15.0 | | | | |
| First-Year Writing | 3.0 | | | | |
| Arts and Sciences electives | 12.0 | | | | |
| Advanced Math/Foreign Language | 6.0 | | | | |
| Advanced Writing | 3.0 | | | | |
| 4. University requirements | 16.5 | | | | |
| Religion | 14.0 | | | | |
| PE/Health | 2.5 | | | | |
| 5. Elective hours | 39.5 | | | | |
| 6. 40 hours upper-division GPA requirement of 2.0 | | | | | |
| 7. Estimated semesters to graduate <table border="0"> <tr> <td>13 hours per semester</td> <td>10.0</td> </tr> <tr> <td>16 hours per semester</td> <td>8.0</td> </tr> </table> | 13 hours per semester | 10.0 | 16 hours per semester | 8.0 | |
| 13 hours per semester | 10.0 | | | | |
| 16 hours per semester | 8.0 | | | | |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | | | | | |

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Geography Minor

This minor is for students from majors outside geography (18 hours): Geog 101, 120, 211, 221, 222, 301, 450. Electives may be taken in addition.

BS Geography Teaching

See Geography in the Secondary Education section of this catalog for information about this teaching major.

Geography Teaching Minor

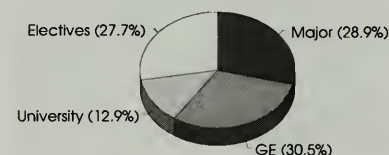
This minor (18 hours) is for students from majors outside geography. See Geography in the Secondary Education section of this catalog for information.

BS Planning and Resource Management

- I. Geog 101, 211, 212, 222, 302, 310, 312, 410, 450, 515; Soc 205 or equivalent.
- II. 6 hours from Geog 301, 331, 341, 399R, 401, 405.
- III. Supporting courses: Select 9 hours in consultation with geography advisor from the following:
 - A. Resource: AgHrt 282, 303, 308; Botny 205, 210, *250, *400; Chem 101, 105; Zool 334, *350; Geol 111, 435; RMYL 425, 523, 582.
 - B. Planning: CM *417, *426; Art *315; PlSc 311, 312, 330; RMYL 582; CivE *565.

*Highly recommended.

Summary of Degree Requirements for BS Planning and Resource Management



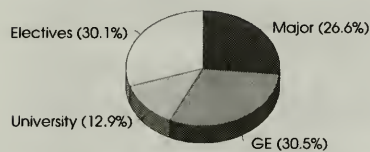
- | | | | | | |
|---|-----------------------|------|-----------------------|-----|--|
| 1. Total hours | 128.0 | | | | |
| 2. Major hours* | 37.0 | | | | |
| 3. General Education requirements | 39.0 | | | | |
| Core | 15.0 | | | | |
| First-Year Writing | 3.0 | | | | |
| Arts and Sciences electives | 12.0 | | | | |
| Advanced Math/Foreign Language | 6.0 | | | | |
| Advanced Writing | 3.0 | | | | |
| 4. University requirements | 16.5 | | | | |
| Religion | 14.0 | | | | |
| PE/Health | 2.5 | | | | |
| 5. Elective hours | 35.5 | | | | |
| 6. 40 hours upper-division GPA requirement of 2.0 | | | | | |
| 7. Estimated semesters to graduate <table border="0"> <tr> <td>13 hours per semester</td> <td>10.0</td> </tr> <tr> <td>16 hours per semester</td> <td>8.0</td> </tr> </table> | 13 hours per semester | 10.0 | 16 hours per semester | 8.0 | |
| 13 hours per semester | 10.0 | | | | |
| 16 hours per semester | 8.0 | | | | |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | | | | | |

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Travel and Tourism

- I. Geog 101, 120, 270, 352, 370, 371.
 - II. Two classes from Geog 450, 455, 460, 465, 470, 471, 480, 485, 502R.
 - III. One class from Geog 301, 302, 331, 341.
 - IV. Supporting courses: Five classes from Acc 200, 341; BusM 256, 340; ManEc 300; OrgB 320, 333; Comms 201, 230, 235; RMYL 311, 483; Soc 205, 358; Hum 201, 202, 240, or 242; Hist 201 or 202; Hum 270; Europ 336; one of Anthr 312, 317, 325, 326, 327, 330, 340, 341R, or 343; OrgB 320, 333.
 - V. Optional: Geog 399R or 275.
- Recommended: ISys 098.

Summary of Degree Requirements for BS Travel and Tourism



1. Total hours	128.0
2. Major hours*	34.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	38.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Travel and Tourism Minor

This minor is for students from majors outside geography (18 hours): Geog 120, 270, 352, 370, 371, plus one regional course.

Geography (Geog)

Undergraduate Courses

101. Introduction to Geography. (3:3:0) F, W, Sp, Su Independent Study also.

The physical environment. Distributions and interrelationships of climates, landforms, soils, and natural resources, and their significance to man.

120. Geography and World Affairs. (3:3:0) F, W, Sp, Su Independent Study also.

Survey of the world, stressing geography of major political regions.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of department chair, cooperative education coordinator, and faculty supervisor.

Evaluated work experience.

211. Map Reading and Analysis. (2:1:2) F, W, Sp

Maps as tools for spatial analysis of problems in physical and cultural geography.

212. Image Interpretation. (2:1:2) F, W

Concepts in the acquisition and use of small- and large-scale imagery. Landscape interpretation and feature measurement from air photographs and satellite imagery.

221. Geographic Modes and Models. (2:2:0) F, Su

Historical background and present diversity in geographical analysis, with attention to more common models used.

222. Design and Methodology in Geographic Inquiry. (2:2:0) W Prerequisite: Soc 205 or comparable background course in statistics.

Organizing, acquiring, and using geographic data for research purposes; emphasizes learning and applying research techniques in individual geographic projects.

270. Travel Planning, Rates, and Tariffs:

Domestic and International. (4:4:0) F, W, Sp
Procedures of domestic and international trip planning including ticketing, routing, fare structure, rates, and tariffs.

275. Tourism Automation. (1:0:2) F, W, Sp
Prerequisite: Geog 270.

Computer usage for international and domestic scheduling, reservations, and ticketing.

301. Introduction to Cultural Geography. (3:3:0) F, W, Alt. term

Culture distributions and their relationship to existing geographic phenomena.

302. Geography of Urban Environment. (3:3:0) F

Urban patterns analysis and spatial structure of cities as it affects its residents.

310. Principles of Land Use Planning. (3:3:0) F

Land use concepts, practical and theoretical problems, activities, and techniques.

312. Cartographic Design. (2:2:0) F

Prerequisite: Geog 211.

Graphic perception, layout, typography, color, statistical methods and symbolization of thematic maps through computer-aided techniques.

313. Remote Sensing of Environment. (3:3:0)

F Prerequisite: Geog 211, 212

Introduction to airborne and spaceborne sensors, including instrument characteristics, image acquisition, georeferencing, enhancement, and classification. Emphasizes land cover mapping applications appropriate for environmental monitoring.

331. Economic Geography. (3:3:0) F, Alt. term

Introduction to economic processes and spatial patterns, emphasizing theoretical approaches, locational strategies, and changing economic land-use patterns.

341. Political Geography. (3:3:0) F, W, Sp or Su

Behavioral/spatial analysis of global politics; focus on political economy, geopolitics, imperialism, politics of resources and ecology, and nationalism.

345. Geographic Fundamentals for Family Historians. (2:2:0) W

Spatial setting of family history; how to find places no longer in use and work with civil and ecclesiastical boundary changes. Use of maps as primary research data.

346. Population Geography. (3:3:0) W

Spatial perspective on wide field of population studies, focusing on distribution, development, structure, and movement of populations; introduction to basic demographic measures.

350R. Topics in Systematic Geography. (3:3:0 ea.)

Detailed investigation of selected systematic topics; emphasis on current world affairs and problems.

352. Tour Operation. (3:3:0) F, W

Independent Study also.

Broad overview of tour operations; travel counseling.

370. Tourism: A Conceptual Framework. (3:3:0) F, W, Alt. term Independent Study also.

Introduction to tourism as a field of study; four elements of tourism: dynamic, service, functional, and consequential.

371. Tourism: Patterns and Analysis. (3:3:0) F, W, Alt. term Independent Study also.

Patterns in domestic and international tourism; interrelationship between geography and tourism in understanding the patterns and their impact.

399R. Cooperative Education. (1–3:Arr.:Arr. ea.) F, W, Sp, Su

On the job experience. No more than 3 hours total in cooperative education may be counted in major.

401. Geography of Climates. (2:2:0) W even yr. Prerequisite: Geog 101 or instructor's consent.

Elements, controls, distribution, and classification of the earth's climates.

405. Geography of Landforms. (2:2:0) W odd yr. Prerequisite: Geog 101 or instructor's consent.

Elements of landforms: distributions and cultural significance.

410. Practices of Land Use Planning. (3:3:0) W

In-depth analysis of the comprehensive planning process; emphasizes alternative methods of creating and implementing a plan.

412. Cartographic Production Techniques. (3:1:4) F Prerequisite: Geog 312 or concurrent registration.

Achromatic map design and production emphasizing photomechanical techniques.

430. Low-Altitude/Large-Scale Imagery Acquisition. (2:2:3) W

Low-altitude aerial reconnaissance for geographic and cartographic analysis using remote-controlled platforms. System construction, operation, and imagery interpretation.

450. United States and Canada. (3:3:0) F, Sp Independent Study also.

Climates, landforms, natural resources, agriculture, industries, and peoples.

455. Middle and South America. (3:3:0) W

Environmental, cultural, economic, and political parameters of Latin American societies; focus on economic development and environmental conservation.

460. Europe. (3:3:0) F

Systematic approach to physical base, social and political problems, economic issues, and regional summary.

465. Commonwealth of Independent States (formerly U.S.S.R.). (3:3:0) W

Physical features, resources, political issues, economy and industries, population concerns, and role in world affairs.

470. Asia. (3:3:0) F odd yr.

Physical, social, economic, and political influences in cultures of South, East, and Southeast Asia.

471. Middle East. (3:3:0) F even yr.

Physical and human geography of Southwest Asia and North Africa.

480. Australia and New Zealand. (2:2:0) F odd yr.

Comparison of physical patterns, historical development, and present cultural patterns.

485. Sub-Saharan Africa. (3:3:0) W even yr.

Geographical analysis with a focus on resource management, political issues, development, environmental problems, economic development, and urban-rural change; case studies from selected countries.

493R. Special Problems. (1–3:Arr.:0 ea.) F, W, Sp, Su Prerequisite: geography major or departmental approval.

499. Senior Paper. (1:0:0) F, W, Sp, Su

Research paper for majors to be done in conjunction with other upper-division class.

Advanced Undergraduate or Graduate Courses

501R. Topics in Systematic Geography. (1–3:3:0 ea.)

Detailed investigation of selected systematic topics; emphasis on current world affairs and problems.

502R. Seminar in Regional Geography. (1–3:0:0 ea.)

512. Cartographic Reproduction. (3:1:4) W Prerequisite: Geog 312, 412, 517.

Color map production using separations and precision registration for reproduction.

513. (Geog-CivE) Photogrammetry and Remote Sensing. (3:2:3) Sp Prerequisite: CivE 113.

Using data obtained from visible range (photographs) and broader ranges (radar, microwaves, infrared, remote, etc.) of the electromagnetic spectrum to solve engineering problems with mapping procedures; photo and electronic data interpretation.

515. Geographic Information Systems (GIS). (3:3:0) F, W Prerequisite: Geog 211.

Applying GIS techniques to solving geographic problems in natural and cultural environments, emphasizing planning and resource management.

517. Analytical Cartography. (4:4:0) W odd yr. Prerequisite: Geog 515, CS 142.

Geocoding, spatial data representation, map-based transformations, and cartographic modeling.

580. Geography of the Developing World. (3:3:0) F odd yr. Prerequisite: instructor's consent.

Analysis and description of the developing world from a spatial perspective; focus on current policy issues, theories, and management practices.

599R. Cooperative Education. (1–3:Arr.:Arr. ea.)

On-the-job experience. No more than 3 hours in cooperative education may count toward any one degree.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

600R. Graduate Colloquium. (1:2:0 ea.)

601. Seminar in Physical Geography. (2:2:0)

610. Planning: Analysis and Implementation. (2:2:0)

612. Seminar in Cartographic Information Analysis. (2:2:0)

620. Seminar in Cultural Geography. (2:2:0)

690R. Readings. (1–2:Arr.:0 ea.)

695R. Special Problems. (1–3:0:0 ea.)

699R. Master's Thesis. (1–6:Arr.:Arr. ea.)

Geology

Dana T. Griffen, Chair (258 ESC)

Professors

Baer, James L. (1969) BS, Ohio State U., 1957; MS, PhD, Brigham Young U., 1962, 1968.

Benson, Alvin K. (1986) BS, PhD, Brigham Young U., 1966, 1972.

Best, Myron G. (1965) BS, U. of Utah, 1957; PhD, U. of California, Berkeley, 1961.

Christiansen, Eric H. (1986) BS, Brigham Young U., 1977; ScM, Brown U., 1978; PhD, Arizona State U., 1981.

Griffen, Dana Thomas (1979) BS, U.S. Naval Academy, 1965; MS, PhD, Virginia Polytechnic Inst., 1973, 1975.

Kowallis, Bart J. (1982) BS, Brigham Young U., 1977; MS, PhD, U. of Wisconsin, Madison, 1979, 1981.

Miller, Wade E. (1971) AA, El Camino Coll., 1957; BS, Brigham Young U., 1960; MS, U. of Arizona, 1963; PhD, U. of California, Berkeley, 1968.

Petersen, Morris S. (1966) BS, MS, Brigham Young U., 1955, 1956; PhD, U. of Iowa, 1962.

Associate Professors

Keith, Jeffrey D. (1990) BS, Brigham Young U., 1977; MS, PhD, U. of Wisconsin, Madison, 1980, 1982.

Mayo, Alan L. (1987) BS, MS, San Diego State U., 1970, 1972; PhD, U. of Idaho, 1981.

Ritter, Scott M. (1991) BS, MS, Brigham Young U., 1981, 1983; PhD, U. of Wisconsin, Madison, 1986.

Assistant Professor

Morris, Thomas H. (1990) BS, Brigham Young U., 1981; MS, PhD, U. of Wisconsin, Madison, 1985, 1986.

Associate Scientist

Tingey, David G. (1990) BS, MS, Brigham Young U., 1983, 1989.

Emeriti

Bissell, Harold J. (1946) BS, Brigham Young U., 1934; MS, PhD, U. of Iowa, 1936, 1948.

Brimhall, Willis H. (1955) BS, Brigham Young U., 1949; MS, U. of Arizona, 1951; BES, Brigham Young U., 1960; PhD, Rice U., 1966.

Bullock, Kenneth C. (1943) BS, MA, Brigham Young U., 1940, 1942; PhD, U. of Wisconsin, Madison, 1949.

Bushman, Jess R. (1955) BA, Brigham Young U., 1949; PhD, Princeton U., 1958.

Hamblin, Wm. Kenneth (1962) BS, MS, Brigham Young U., 1953, 1954; PhD, U. of Michigan, 1958.

Hintze, Lehi F. (1955) BA, U. of Utah, 1941; MA, PhD, Columbia U., 1949, 1951.

Phillips, Wm. Revell (1957) BS, MS, PhD, U. of Utah, 1950, 1951, 1954.

Rigby, J. Keith (1953) BS, MS, Brigham Young U., 1948, 1949; PhD, Columbia U., 1952.

Programs and Degrees

BA Earth and Space Science Education
BS Engineering Geology
BS Geology

Emphasis:

Environmental Geology
BS Honors in Geology and University Honors
MS Geology

Graduates have the opportunity to work in the great outdoors and in the laboratory, pursuing careers in energy, mineral, and water resources or in environmental evaluation with industry, government, or consulting firms. Graduates' substantial preparation in basic sciences and mathematics leads to a broad spectrum of teaching opportunities.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Required High School Preparation

Note: It is recommended that a student complete the following courses in high school:

3 units of English
1 unit of physical science, either chemistry or physics.

Because mathematics provides the foundation for all work in the physical and mathematical sciences, particular attention is paid to high school preparation in this subject.

4 units of mathematics, consisting of 2.5 units of algebra, 1 unit of geometry, and 0.5 unit of trigonometry. These units should qualify students to begin college mathematics with Math 112, analytic geometry and calculus.

To decide which mathematics course should be taken first, write to the

Mathematics Department, 292 TMCB, and request a mathematics placement test.

Core Requirements for All Degree Programs in Geology

- I. Major courses: Geol 111, 112, 210, 491R (2 hours).
- II. Supporting courses: Math 112, 113, Phscs 121, 122, Chem 105, 106, 107, CS 142, Engl 316.
- III. No D grade is acceptable.

Note 1: Engineering geology majors may substitute Geol 330 for 111; Chem 111 and 112 are recommended.

Note 2: PhyS 100 is not required.

BA Earth and Space Science Education

See Earth and Space Science in the Secondary Education section of this catalog for information about this teaching major.

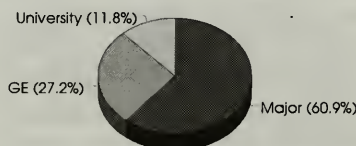
BS Engineering Geology

With increasing demands for clean water and hazardous waste repositories and for construction of man-made structures in geologically adverse sites, the need for imaginative professionals able to interface between pure geology and engineering continues to be a stable employment opportunity.

I. In addition to above core requirements: Geol 311, 351, 352, 370, 410, 412, Math 214, 321, Phscs 221; CivE 103, 113, 203, 332, 341, 431; and 9 credit hours from Geol 411, 435, 440, 445, 451, 460, 511, 520, 559, 560.

II. Suggested electives: Stat 221, RelC 491.

Summary of Degree Requirements for BS Engineering Geology



1. Total hours	139.5
2. Major hours*	85.0
3. General Education requirements	38.0
Core	12.0
First-Year Writing	3.0
Arts and Sciences electives	13.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.5
16 hours per semester	8.5

8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

***Note:** Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W	Sp
Geol 111 (330), 112	4 (3)	4	
Math 112, 113	4	4	
Chem 111, 112 (105, 106, 107)	3(4)	3(4)	
Phscs 121, 122	3	3	
Second Year			
Geol 210	3		
Geol 351, 352	4	3	
Math 214, 321	3	2	
CS 142		2	
CivE 103, 113	2	3	
Phscs 221	3		
Third Year			
Geol 311, 370	6		9
Geol 410, 412			
Geology elective		3	
CivE 203, 332	3	3	
Engl 316	3		
Fourth Year			
Geology electives	3	3	
CivE 431, 441	3	3	

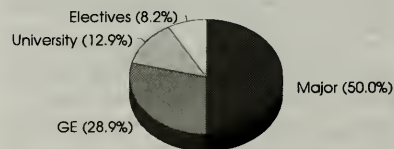
BS Geology

This basic degree in geology prepares graduates for professional employment in industry, government, or private sectors or for advanced studies in geology, business, or law.

I. In addition to above core requirements: Geol 311, 351, 352, 370, 410, 412; Phscs 221; and 9 credit hours from Geol 411, 435, 440, 445, 451, 460, 480.

II. Suggested elective: RelC 491.

Summary of Degree Requirements for BS Geology



1. Total hours	128.0
2. Major hours*	64.0
3. General Education requirements	37.0
Core	12.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5

Religion	14.0
PE/Health	2.5
5. Elective hours	10.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W	Sp
Geol 111, 112	4	4	
Chem 105, 106, 107 (111, 112)	4(3)	4(3)	
Math 112, 113	4	4	
Second Year			
Geol 210	3		
Geol 351, 352	4	3	
Phscs 121, 122	3	3	
Geol 311	3		
CS 142	2		
Third Year			
Geol 370	3		
Geol 410, 412			9
Geol 400 elective		3	
Phscs 221	3		
Engl 316	3		
Fourth Year			
Geol 400 electives	3	3	

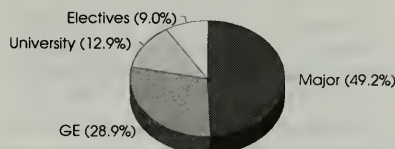
Environmental Geology Emphasis

Increasing concern with environmental degradation and natural geologic hazards has led to a demand for geologists who are both well grounded in the fundamentals of the science of geology and specifically prepared to address environmental problems. This degree prepares students for careers either in the environmental services industry or government or for advanced studies.

I. In addition to above core requirements: Geol 311, 351, 370, 404, 420, 435, 436; AgHrt 282; CivE 113; 5-6 credit hours from Geol 411, Hlth 454, AgHrt 407, CivE 351, Geog 310.

II. Suggested elective: RelC 491.

Summary of Degree Requirements for Environmental Geology Emphasis



1. Total hours	128.0
2. Major hours ♦	63.0
3. General Education requirements	37.0
Core	12.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	11.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
Same as for BS Geology		
Second Year		
Same as for BS Geology, but substitute AgHrt 282 for Geol 352		
Third Year		
Geol 370	3	
CivE 113	3	
Engl 316	3	
Geol 420, 404	3	3
Program elective		3
Fourth Year		
Geol 435	3	
Geol 436	3	
Program elective		2-3

BS with Honors in Geology and University Honors

Like the bachelor of science degree in geology, the Honors track offers a curriculum strong in the sciences and mathematics. Students pursuing a BS with Honors in geology have the additional advantage, however, of greater depth and breadth. Successful completion of this degree prepares graduates for careers ranging from geologically oriented professions to medicine, law, business, or education.

I. Honors requirements:

- A. The Honors General Education graduation requirements as listed in the Honors Education section of this catalog. Phil 201H-202H is highly recommended for the civilization requirement. The foreign language proficiency requirement should preferably be met in German, Russian, French, Japanese, or Spanish.
- B. General Education: Biol 100H must be taken for the biological science core requirement.

II. Geology requirements: Students must make the following adjustments in the geology BS major requirements:

- A. Additional courses to strengthen the understanding and integration of concepts in physical science classes:
 1. RelC 491, 492 (College of Physical and Mathematical Sciences section).
 2. Math 214.
 3. Strongly recommended: Math 112H, 113H, Phscs 121H, Engl 316H, Stat 222.
- B. Honors thesis: A critical part of the geology BS with Honors, the Honors thesis is based on a geological research project and registration in Geol 499R (6 hours). The student will do significant research, conduct scientific evaluation, compose the paper, and receive peer group criticism. Topics for thesis research will come from geological and geophysical problems from both nearby and distant areas. A research advisor will be selected and the project should get underway early in the junior year of study. An oral defense of the thesis is required, and an oral presentation will be made at a geology seminar or the Spring Research Conference of the College of Physical and Mathematical Sciences. It is highly recommended that the thesis be submitted to a scientific journal for possible publication.

Geology Minor

16 credit hours, including Geol 111, 112, and at least 8 credit hours from 210, 286, 311, 351, 352, 355, 370, 411, 435, 436, 440, 445, 480. No D credit will count toward a geology minor.

Geology Teaching Minor

See Geology in the Secondary Education section of this catalog.

Geology (Geol)

Undergraduate Courses

101. Introduction to Geology. (3:2:1) F, W, Sp, Su Honors also.

Cultural focus on physical and environmental geology for nonscience majors; rocks and minerals. Field trips.

103. Life of the Past. (3:2:1) F, W, Sp

Cultural focus on historical geology for nonscience majors; fossils. Field trips.

109. Geology of the Planets. (3:3:0) W

Origins and distinctive histories of the planets in our solar system as revealed by study of their surface features. For nonscience and science majors.

111. Physical Geology. (4:3:2) F Prerequisite: Math 112 or concurrent registration.

Materials, structure, and surface features of the earth and the geologic processes involved in their development. Field trips and lab studies, use of aerial photos.

112. Historical Geology. (4:3:2) W

Prerequisite: Geol 111.

Developmental history of the earth, its landforms, and life forms, emphasizing the North American continent. Field trips and lab studies.

199R. Cooperative Education. (1–3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

210. Field Studies. (3:0:9) F Prerequisite: Geol 111, 112.

Procedures in observing, collecting, and recording field data concerning properties of rock units; interpretive concepts; use of Brunton compass, topographic maps, and aerial photos. Contact Geology Department for dates of trips before fall semester.

286. Prehistoric Vertebrates. (3:3:0) W alt. yr.

Major groups of prehistoric vertebrates, emphasizing reptiles (especially dinosaurs) and mammals. Scientific and cultural values considered.

311. Structural Geology. (3:3:2) F

Prerequisite: Geol 111, 210; Phscs 121 or concurrent registration.

Geometric, kinematic, and dynamic analysis of tectonic features. Practical exercises. Field trips. Use of aerial photos.

330. Geology for Engineers. (3:2:2) F, W

Geological processes and materials bearing on engineering practices. Field trips.

351. Mineralogy. (4:3:2) F Prerequisite: Chem 105 or 111 or concurrent registration; Phscs 121.

Principles of crystallography and crystal chemistry. Physical, chemical, and crystallographic properties of minerals.

352. Petrology. (3:3:2) W Prerequisite: Geol 210, 351, Chem 105 or 111.

Compositions, fabrics, and field relations of igneous and metamorphic rocks; behavior of rock-forming systems. Field trips.

355. Gemology. (3:2:2) F Prerequisite: Phys 100.

Those minerals used as gems: crystallography, crystal chemistry, physical and optical properties, geologic occurrence, mining methods; evaluation, traditions, and history. Lab: identification and testing.

370. Stratigraphy and Sedimentation. (3:3:3) F Prerequisite: Geol 111, 112.

Sediments, sedimentary rocks, and principles of stratigraphy. Field trips.

399R. Cooperative Education. (1–9:0:0 ea.) F, W, Sp, Su

404. Environmental Geology. (3:2:2) W Prerequisite: Geol 111 or 330.

Theoretical and applied environmental geology; groundwater and soil contamination, waste disposal, mine tailings and drainage; natural and man-made geologic hazards. Field trips.

410. Summer Field Course. (5:0:40) Sp

Prerequisite: Geol 311, 352, 370, and concurrent registration in 412.

Eight-week camp required of all geology and geological engineering majors. Fee.

411. Geomorphology. (3:2:2) W Prerequisite: Geol 111.

Interpretive analysis of landforms and their geologic and environmental significance. Field trips. Use of aerial photos.

412. Geological Methods, Literature, and Scientific Reporting. (4:0:9) Sp Prerequisite: Geol 311, 352, 370, and concurrent registration in 410.

Practice in fieldwork with instruments; indexes, sources of geologic information, and preparing professional geological reports.

420. Environmental Geophysics. (3:2:2) F Prerequisite: Phscs 121, 122, Geol 111, 112, Math 113.

Applications of various geophysical survey methods to assess shallow geological problems, especially near-surface environmental problems, such as groundwater contaminants, sinkholes, faulting, etc.

435. Introduction to Groundwater. (3:3:0) F Prerequisite: Geol 111 or 330; Math 110.

Introduction to the occurrence, movement, and properties of subsurface water; surface and groundwater relationships.

436. Field Methods in Environmental Geology. (3:0:6) F Prerequisite: Geol 435 or concurrent registration.

Methods used to observe, collect, and record field data and samples used in groundwater investigations; soil-gas analysis; landslide and flood-plain mapping; seismic investigations.

440. Introductory Geophysics. (3:2:2) W Prerequisite: Phscs 221.

Physics of the earth, including earthquake seismology. Gravity, seismic, magnetic, electrical, and heat flow properties and methods.

445. Geochemistry. (3:3:0) W Prerequisite: Chem 106; 107 or 112; Geol 352.

Applying elementary chemical principles to understand geologic processes and materials.

451. Optical Mineralogy. (3:2:2) F Prerequisite: Geol 351.

Fundamentals of optical crystallography and mineral identification techniques.

460. Economic Geology. (3:2:2) F Prerequisite: Geol 352.

Principles, genesis, and localization of ore deposits, including laboratory study of ore minerals. Field trips.

480. Paleontology. (3:3:2) W Prerequisite: Geol 112.

Distribution, morphology, paleoecology, evolution, and stratigraphic significance of organisms in the geologic record. Field trips.

491R. Geology Seminar. (0.5:1:0 ea.) F, W

Seminars on various geologic topics by guest speakers.

499R. Honors Thesis. (1–6:Arr.:Arr. ea.) F, W, Sp, Su

Advanced Undergraduate or Graduate Courses

502. Geology for Teachers. (2:2:0) On dem. Prerequisite: Geol 101, 103; or 111, 112.

Materials and methods useful for junior and senior high school earth science teachers.

510. Conducted Field Trips. (1:Arr.:3) F, W, Sp, Su Prerequisite: any college-level geology course and instructor's consent.

Geology field trips.

511. Advanced Structural Geology. (3:2:3) F alt. yr. Prerequisite: Geol 311, 410.

In-depth discussions of a variety of topics in structural geology, emphasizing current literature and problems.

520. Petroleum Geology. (3:2:2) W alt. yr. Prerequisite: Geol 311, 370.

Origin, migration, and entrapment of liquid and gaseous hydrocarbons.

521. Borehole Geophysics and Geology. (3:3:0) F alt. yr. Prerequisite: Phscs 105, 106 or 121, 122; Geol 351, 370.

Applied well log analysis, including conventional and new techniques. Subsurface geology and lithology determined from electrical, acoustical, radioactive, and other logs.

525. Basin Analysis. (3:3:0) F alt. yr. Prerequisite: Geol 370.

Tectonic basin development, including extensional, compressional, flexural, and strike-slip processes. Processes of basin-fill and thermal histories emphasizing sequence and seismic stratigraphy.

545. Isotope Geochemistry. (3:1:4) W alt. yr. Prerequisite: Geol 352.

Use of stable and radioactive isotope systematics in geochronology and investigation of origins of rocks and waters.

550. X-Ray Crystallography. (3:2:2) On dem. Prerequisite: Geol 351, Phscs 221.

Theory and geologic applications of X-ray crystallography using both powder and single crystal X-ray diffraction methods.

551. Advanced Mineralogy. (3:2:2) W alt. yr. Prerequisite: Geol 351, Phscs 221.

Crystallography, structure, and crystal chemistry of major silicate mineral groups.

552. Instrumental Methods. (4:1:6) On dem. Prerequisite: Geol 352, 451.

Modern laboratory methods for analyzing rocks and minerals; spectrometry, X-ray diffraction, electron microscopy.

556. Applied Geomathematics. (3:3:0) F alt. yr. Prerequisite: Math 112, 113, Phscs 121, 122.

Applications of algebra, geometry, trigonometry, calculus, matrices, computers, and statistics to the analysis and interpretation of geoscience data.

559. Applied Geophysics 1. (3:3:0) F alt. yr. Prerequisite: Geol 311, Phscs 221.

Principles, tools, and methods in gravity, magnetic, and electromagnetic exploration. Includes acquisition, processing, and interpretation of gravity and magnetic data.

560. Applied Geophysics 2. (3:3:0) W alt. yr. Prerequisite: Geol 311, 559, Phscs 221.

Principles, tools, and methods used in seismic geophysics, with engineering, environmental, exploration and hydrological applications. Includes acquisition, processing, and interpretation of seismic data.

561. Ore Deposits. (3:3:0) On dem. Prerequisite: Geol 460.

Origin, classification, and distribution of metallic ore deposits.

574. Principles of Stratigraphy. (3:2:2) W alt. yr. Prerequisite: Geol 370.

Study of the stratigraphic record using sequence and seismic stratigraphy, biostratigraphy, and radiometric dating techniques. Extended field trip required.

580. Principles of Paleontology. (3:3:0) W alt. yr. Prerequisite: Geol 480.

Modern approaches to fossil study applied to areas of evolution, paleoecology, and biostratigraphy.

582. Biostratigraphy. (3:2:2) W alt. yr. Prerequisite: Geol 480 or 580.

Fossils in their stratigraphic setting and principles of paleontologic chronology.

586. Vertebrate Paleontology. (4:3:2) F alt. yr. Prerequisite: instructor's consent.

History of vertebrate fossils. Field trips required. Credit applies in either zoology or geology. Lab studies.

590R. Short Courses. (1–3:3:3 ea.) F, W on dem.

Short graduate-level courses offered on a random basis.

591R. Seminar. (0.5:1:0 ea.) F, W

Seminars on various geologic topics by guest speakers. Total of 1 credit hour required.

599R. Cooperative Education. (1–9:0:0 ea.) F, W, Sp, Su

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

635. Advanced Hydrogeology. (3:3:0)

636. Hydrogeochemistry. (3:3:1)

637. Groundwater Modeling. (3:1:4)

655. Igneous Petrology. (3:4:3)

671. Sedimentary Petrology—Carbonate Rocks. (3:3:2)

672. Sedimentary Petrology—Clastic Rocks. (3:2:2)

695R. Research. (1–4:4:0 ea.)

696R. Readings and Conferences in Geology. (1–4:4:0 ea.)

697R. Directed Field Studies. (1–6:Arr.:Arr. ea.)

699R. Master's Thesis. (6–9:Arr.:Arr. ea.)

Germanic and Slavic Languages

Alan F. Keele, Chair (4096 JKHB)

Professors

Browning, Gary L. (1974) BA, Brigham Young U., 1965; MA, Syracuse U., 1967; PhD, Harvard U., 1974.

Davis, Garold Neil (1968) BA, MA, Brigham Young U., 1958, 1959; PhD, Johns Hopkins U., 1962.

Jarvis, Donald K. (1970) BA, Brigham Young U., 1964; PhD, Ohio State U., 1970.

Jones, Randall L., Dean, (1978) BA, MA, Brigham Young U., 1963, 1964; MA, PhD, Princeton U., 1966, 1970.

Keele, Alan F. (1971) BA, Brigham Young U., 1967; PhD, Princeton U., 1971.

Kelling, Hans-Wilhelm (1962) BA, Brigham Young U., 1958; MA, PhD, Stanford U., 1960, 1967.

Plummer, Thomas G. (1985) BA, U. of Utah, 1965; MA, PhD, Harvard U., 1966, 1972.

Rogers, Thomas F. (1969) BA, U. of Utah, 1955; MA, Yale U., 1962; PhD, Georgetown U., 1968.

Associate Professors

Abbott, Scott (1988) BA, MA, Brigham Young U., 1973, 1976; PhD, Princeton U., 1979.

Baker, Joseph O. (1967) BA, U. of Utah, 1964; PhD, Tulane U., 1968.

Hart, David Kay (1984) BA, Brigham Young U., 1973; MA, PhD, U. of Washington, 1975, 1979.

Assistant Professors

Davis, William S. (1989) BA, Brigham Young U., 1981; MA, PhD, Stanford U., 1982, 1989.

Grotans, Anna A. (1992) BA, U. of Minnesota, 1984; MA, U. of Toronto, Canada, 1986; PhD, U. of Minnesota, 1992.

Lund, Randall J. (1988) BA, MA, Brigham Young U., 1970, 1973; PhD, U. of Minnesota, 1986.

Stott, Michelle (1987) BA, Weber State Coll., 1978; MA, PhD, U. of Utah, 1981, 1987.

Assistant Lecturer

Michailova, Victoria V. (1990) Dipl, Herten Pedagogical Inst., Russia, 1972.

Emeriti

Folsom, Marvin H. (1961) BA, MA, Brigham Young U., 1956, 1957; PhD, Cornell U., 1961.

Gubler, Donworth V. (1949) BA, MA, PhD, Brigham Young U., 1948, 1949, 1971.

Luckau, Paul F. (1964) BA, MA, U. of Utah, 1949, 1955.

Rogers, R. Max (1945) BA, MA, Brigham Young U., 1940, 1942; PhD, Stanford U., 1951.

Smith, Murray F. (1962) BA, U. of Utah, 1956; MA, PhD, U. of Southern California, 1961, 1967.

Speidel, Walter H. (1963) Abitur, Germany, 1940; Diplomdolmetscher und -Übersetzer, Fachhochschule für das Dolmetscherwesen, Stuttgart, West Germany, 1948; MA, U. of Utah, 1960; PhD, U. of Kansas, 1963.

Watkins, Arthur R. (1952) BA, MA, Brigham Young U., 1941, 1942; PhD, Stanford U., 1948.

Programs and Degrees

BA	German
BA	Honors in German and University Honors
BA	German Teaching
BA	Russian
BA	Honors in Russian and University Honors
BA	Russian Teaching
MA	Language Acquisition (German, Russian, or Scandinavian)
MA	German Literature

Students of foreign language and literature develop fluency in another language as well as sensitivity to their own language and cultural heritage, to the contributions and diversity of other peoples, and to the advantages of an international perspective. Experience with the intellectual, artistic, and spiritual expressions of other cultures and of their own culture helps students qualify for advanced study at graduate and professional schools, especially in linguistics, literature, language teaching

Germanic and Slavic Languages

methodology, library science, humanities, business, law, and medicine. Those who accept employment on completion of the BA degree frequently serve in a government agency, in international business, or in education.

Students would do well to read the College of Humanities introductory statement on humanities students' skills and emphases to gain additional insight.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Language Credit by Examination

See policy in College of Humanities' Language Credit by Examination section of this catalog.

Afrikaans Courses (Afrik)

101, 102. First-Year Afrikaans. (4:5:1 ea.)
Basic language skills.

201. Second-Year Afrikaans. (4:5:1)
Prerequisite: Afrik 102 or equivalent experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

202. Second-Year Afrikaans. (4:5:1)
Prerequisite: Afrik 201 or equivalent.

Further emphasis on reading and writing skills; introduction to literature.

211R. Second-Year Conversation.
(1–5:Arr.:Arr. ea.) Prerequisite: Afrik 102 or equivalent experience.

Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation.
(1–5:Arr.:Arr. ea.) Prerequisite: Afrik 211R or equivalent experience.

Advanced conversational skills.

Bulgarian Courses (Bulgn)

101, 102. First-Year Bulgarian. (4:5:1 ea.)
Basic language skills.

201. Second-Year Bulgarian. (4:5:1)
Prerequisite: Bulgn 102 or instructor's consent based on prior experience.

Grammar review and conversation.

211R. Second-Year Conversation.
(1–5:Arr.:Arr. ea.) Prerequisite: Bulgn 201 or foreign residence experience.

Intermediate listening comprehension and speaking skills.

330. Cultural History of Bulgaria. (3:3:1)
Prerequisite: Bulgn 201 or foreign residence experience.

Entry course for returned missionaries or others with extensive Bulgarian language experience. Required course for obtaining language credit by examination (Bulgn 101, 102, 201, 211R).

Czech Courses (Czech)

101, 102. First-Year Czech. (4:5:1 ea.)
Basic language skills.

201. Second-Year Czech. (4:5:1) Prerequisite: Czech 102 or equivalent experience.
Grammar review and conversation.

211R. Second-Year Conversation.
(1–5:Arr.:Arr. ea.) Prerequisite: Czech 201 or foreign residence experience.

Intermediate listening comprehension and speaking skills.

330. Cultural History of Czech Republic. (3:3:1) Prerequisite: Czech 201 or foreign residence experience.

Entry course for returned missionaries or others with extensive Czech or Slovak language experience. Required course for obtaining language credit by examination (Czech 101, 102, 201, 211R).

Dutch Courses (Dutch)

101, 102. First-Year Dutch. (4:5:1 ea.)
Basic language skills.

201. Second-Year Dutch. (4:5:1) Prerequisite: Dutch 102 or equivalent experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation.
(1–5:Arr.:Arr. ea.) Prerequisite: Dutch 201 or equivalent experience.

Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation.
(1–5:Arr.:Arr. ea.) Prerequisite: Dutch 211R or equivalent experience.

Advanced conversational skills.

340. Introduction to Dutch Literature. (4:4:0)
Prerequisite: reading knowledge of Dutch.

Readings from the best Dutch literature. Introduction to basic literary concepts.

German Program Requirements

No D credit will be accepted as part of major or minor requirements.

BA German

Note 1: Beginning German courses (101, 102, 201, 202) will be waived for students having comparable German training or experience. Consult department for information about placement examinations.

I. Level 1 (8 hours): Germ 101, 102.

II. Level 2 (8 hours): Germ 201, 202.

Note 2: Before proceeding to upper-division courses, students must achieve a prescribed level of language proficiency, which will be tested at the completion of each level. Several language residency programs contribute to this proficiency. See Language Residency Programs section below.

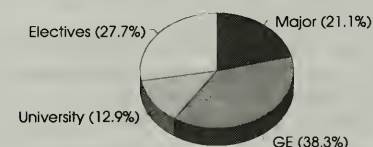
III. Level 3 (15 hours): Germ 310, 320, 330, 340, 350; 360 or 450.

IV. Level 4 (15 hours): Germ 430, 431; two courses from 440R, 441R, or 442R; 495R or 496R.

V. Final German proficiency examination: Germ 491, to be registered for during last semester before graduation. Fee. Not offered spring or summer.

Note 3: Students planning graduate studies in German should begin a second foreign language.

Summary of Degree Requirements for BA German



1. Total hours	128.0
2. Major hours*	27.0
3. General Education requirements	49.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0–16.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	35.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in German and University Honors

1. University Honors: The Honors General Education graduation requirements as listed in the Honors Education section of this catalog.

II. Honors in German (see department for further details): The German Honors major is designed to expand and enhance interpretive reading and writing skills. It contributes more depth and breadth to the German major's academic work. The German Honors major consists of the following three progressive steps:

- A. Read five texts from the German Honors Reading List (available from department), one text from each of five groups. Discuss these five texts in a formal setting with the German Honors faculty. Students will be held to a high level of comprehension of each work.
- B. In consultation with the thesis advisor, place *one* of these texts in context through becoming familiar with:
 1. A few primary texts (literary, graphic arts, historical, philosophical, musical) providing context for the text selected for the thesis.
 2. A few literary-theoretical works informing the particular methodology to be used for the thesis.
 3. A few of the most important secondary works on the thesis topic.

- C. Write an Honors thesis (Germ 499R, 3 hours).

The Honors thesis will be an interpretive "reading" of the *one* text selected. It should be founded in the context provided by the primary texts (B.1.); it should follow the methodology decided on from the literary-theoretical works (B.2.); and it should be supported and documented by the secondary works (B.3.).

BA German Teaching

See German in the Secondary Education section of this catalog. Advisement is available through the Germanic and Slavic Languages Department and the College of Humanities and College of Education advisement centers.

Language Residency Programs

I. Vienna Study Abroad or Honors "WHOLE" program in Vienna (Germ 211R or 311R). An opportunity for developing language proficiency as well as for becoming better acquainted with the history and culture of Europe. Prerequisite: Germ 102 or equivalent.

II. Ten-week German summer work internship (Germ 311R). An opportunity to live and work in Germany or Switzerland. Housing is provided, usually with families in the host country. Prerequisite: Germ 201 or equivalent.

III. Foreign Language Student Residence (Germ 211R, 311R). An opportunity to live with other students who have pledged to

use only German within the house and with head residents who are native speakers of German. Enrollment in a German class in addition to 211R and 311R is required while living in the house. Prerequisite: Germ 102 or equivalent.

IV. German Summer Language Institute (Germ 211R, 311R). An intensive language program in German during the summer term. Participants live in the Student Foreign Language Residence and develop proficiency through intensive instruction and practical application of the language in daily living situations. Prerequisite: Germ 102 or equivalent.

V. German-speaking LDS mission or other extended German-speaking residency (advanced students enroll in Germ 330 and, if desired, complete examinations for Germ 101, 102, 201, and 4 hours of 311R).

German Minor

Complete 17 hours beyond level 2: Germ 310, 320, 330, 430 or 431, and an additional 6 or more hours from 340, 350, 360, 430, 431, 440R, 441R, 442R, 450. (Germ 340 or instructor's consent is prerequisite to 440R, 441R, 442R.)

German (German)

Undergraduate Courses

101. First-Year German. (4:5:1)

For those who have had no German. Listening, speaking, reading, writing, grammar, and culture.

102. First-Year German. (4:5:1) Prerequisite: C grade or better in Germ 101 or equivalent.

Listening, speaking, reading, writing, grammar, and culture.

121, 122. Intensive Reading in German.

(4:4:0 ea.) For students with little or no German who desire reading skills.

Reading, including reading skills in the area of student's specialization. Undergraduate students receive letter grades; graduate students are graded pass/fail.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) Prerequisite: consent of both department chair and cooperative education coordinator.

On-the-job experience evaluated by supervisor and posted on student's transcript. Report required. Not applicable to German major or minor.

200R. Second-Year Proficiency Tutorial. (1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: completion of Germ 102 or equivalent.

Individualized skill building in listening, speaking, reading, writing, and grammar.

201. Second-Year German. (4:5:1)

Prerequisite: C grade or better in Germ 102 or equivalent.

Reading, writing, grammar, culture, listening, and speaking.

202. Second-Year German. (4:5:1)

Prerequisite: C grade or better in Germ 201 or equivalent.

Culminating course for GE Foreign Language requirement emphasizing culture and literature. Continued writing, grammar, listening, and speaking. Prerequisite to all 300- and 400-level courses.

211R. Intermediate Conversation.

(1-5:Arr.:Arr. ea.) Prerequisite: Germ 102 or equivalent experience.

Offered only in language residency programs: Foreign Language Student Residence, German Summer Language Institute, German-speaking work internship, German-speaking study abroad.

300R. Third-Year Proficiency Tutorial.

(1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: completion of Germ 202 or equivalent.

Individualized skill building in listening, speaking, reading, writing, and grammar.

310. German Phonetics and Pronunciation.

(2:2:1) Prerequisite: Germ 202 or equivalent experience.

Perfecting listening and speaking skills through application of phonetics. Continued reading, writing, grammar, and culture as secondary emphases.

311R. Advanced Conversation.

(1-5:Arr.:Arr. ea.) Prerequisite: Germ 211R or equivalent experience.

Offered only in language residency programs: Foreign Language Student Residence, German Summer Language Institute, German-speaking work internship, German-speaking study abroad.

320. Third-Year German Grammar and Composition. (3:3:0) Independent Study

also. Prerequisite: Germ 202 or equivalent experience.

Intensive review of grammar; written and oral reports. Continued listening, reading, and culture as a secondary emphasis. Prerequisite to all 400-level courses.

330. Cultural History of German-speaking Peoples. (3:3:1) Prerequisite: Germ 202 or equivalent experience.

Entry course for returned missionaries or others with equivalent German language experience. Culture, with listening, speaking, reading, writing, and grammar as secondary emphases. Required course for obtaining language credit by examination (Germ 101, 102, 201, 311R). Prerequisite to all 400-level courses.

340. Introduction to Literary Analysis.

(3:3:0) Prerequisite: Germ 202 or equivalent experience.

Methods of literary interpretation and their application to German prose, drama, poetry, and film. Continued listening, speaking, writing, grammar, and culture as secondary emphases. Prerequisite to all 400-level courses.

350. Readings in Contemporary Society. (2:2:0) Prerequisite: Germ 320 or concurrent registration. Recommended: Germ 330.

Analyzing current news items from German-speaking countries as a basis for cultural, grammatical, and stylistic study.

360. Structure of Modern German. (2:2:0) Prerequisite: Germ 320.

Grammatical and stylistic study with listening, speaking, reading, writing, and culture as secondary emphases.

377. German Language Teaching Procedures. (3:3:2) Prerequisite: Germ 310, 320, 330; ScEd 276R for students who wish to certify. Required for teaching majors and minors as well as for departmental teaching assistants.

399R. German Work Internship. (1–9:Arr.:Arr. ea.)

On-the-job ten-week summer language experience in German-speaking countries. Report required. Not applicable to German major or minor.

400R. Fourth-Year Proficiency Tutorial. (1–3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: senior status.

Individualized skill building in listening, speaking, reading, writing, and grammar.

430. Masterpieces of German Literature 1. (3:3:0) Prerequisite: Germ 320, 330.

Close reading and analysis of literature from medieval through romantic period.

431. Masterpieces of German Literature 2. (3:3:0) Prerequisite: Germ 320, 330.

Close reading and analysis of literature from realism to the present.

440R. German Literary Periods and Movements. (3:3:0 ea.) Independent Study also. Prerequisite: Germ 320, 330, 340.

In-depth study of a period or movement such as medieval, Renaissance, baroque, eighteenth century, romanticism, classicism, realism, fin-de-siecle Vienna, naturalism, expressionism, post-war, contemporary.

441R. Studies in German Literary Genres. (3:3:0 ea.) Prerequisite: Germ 320, 330, 340.

In-depth study of a genre such as drama, novel, novella, lyric, film.

442R. Major German Authors. (3:3:0 ea.) Prerequisite: Germ 320, 330, 340.

In-depth study of works by one major author.

450. History of the German Language. (2:2:0) Prerequisite: German 310, 320.

490R. Special Studies in German. (1–3:Arr.:Arr. ea.) Prerequisite: consent of department chair.

Variable credit for individual or group study as approved for special circumstances. Not applicable to German major or minor. Pass/fail only.

491. Senior German Examination. (0:0:0) F, W

All majors are required to register for 491 in the semester they plan to take the Senior Proficiency Exam. Recommended that students take examination last semester before graduation. Fee.

495R. Senior Seminar in German Language. (3:3:0 ea.)

Culminating senior-level course in which acquired knowledge and critical skills are brought to bear on a selected language topic. In-depth senior paper on one aspect of topic.

496R. Senior Seminar in German Literature. (3:3:0 ea.)

Culminating senior-level course in which acquired knowledge and critical skills are brought to bear on a selected literature topic. In-depth senior paper on one aspect of topic.

499R. Honors Thesis. (1–6:Arr.:Arr. ea.)

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

615. Applied German Linguistics. (3:3:0)

640R. German Literary Periods and Movements. (3:3:0 ea.)

641R. Studies in German Literary Genres. (3:3:0 ea.)

642R. Major German Authors. (3:3:0 ea.)

670R. Tutorial Internship in German. (1–3:0:0 ea.)

680R. Special Studies in German. (1–3:0:0 ea.)

690R. Seminar in German. (3:3:0 ea.)

699R. Master's Thesis. (1–6:0:0 ea.)

Hungarian Courses (Hung)

101, 102. First-Year Hungarian. (4:5:1 ea.) Basic language skills.

201. Second-Year Hungarian. (4:5:1) Prerequisite: Hung 102 or instructor's consent based on prior Hungarian experience.

Grammar review and conversation.

211R. Second-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: Hung 201 or foreign residence experience.

Intermediate listening comprehension and speaking skills.

330. Cultural History of Hungary. (3:3:1) Prerequisite: Hung 201 or foreign residence experience.

For returned missionaries and others with extensive Hungarian language experience. Required course for obtaining language credit by examination (Hung 101, 102, 201, 211R). Culminating course for GE Foreign Language requirement.

Polish Courses (Polish)

101. First-Year Polish. (4:5:1) Basic language skills.

101A, B. First-Year Polish, Slow Paced. (2:3:1 ea.) Basic language skills.

102. First-Year Polish. (4:5:1) Prerequisite: Polsh 101.

Continuation of Polsh 101.

201. Second-Year Polish. (4:5:1) Prerequisite: Polsh 102 or foreign residence experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: Polsh 201 or foreign residence experience.

Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: Polsh 211R or foreign residence experience.

Advanced conversational skills.

330. Cultural History of Poland. (3:3:1) Prerequisite: Polsh 201 or foreign residence experience.

For returned missionaries or others with extensive Polish language experience. Required course for obtaining language credit by examination (Polsh 101, 102, 201, 211R). Culminating course for GE Foreign Language requirement.

Russian Program Requirements

No D credit will be accepted as part of major or minor requirements.

BA Russian

I. Preparatory courses (20 hours): Russ 101, 102, 201, 202.

II. Major courses (26 hours): Russ 240, 245, 311, 312, 321, 322, 411, 412, 441, 442.

III. Allied program requirements: One of the following four options:

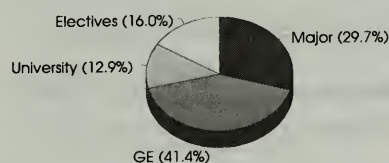
- A. Any second university major. (European Studies and International Relations with a Russian emphasis are recommended majors for students intending to continue in Russian after graduation. When combined with Russian, each of these majors requires approximately 30 hours.)
- B. Supporting courses (18 hours): Hist 330, 331, Econ 110 (Econ 230 highly recommended), Geog 465, PlSc 350; 383 or 386.
- C. Secondary education certification in Russian (28 hours).
- D. A program of study proposed by the student (normally to include Hist 330 and 331). This program must be fully described and justified in writing and judged by the Russian faculty to be in

the student's best educational and professional interest.

IV. Russian proficiency examination, Russ 491. Fee. Available fall semester only.

Most students, in addition to completing all Russian course work, live for at least a semester in the Student Foreign Language Residence and participate in a study program in the Commonwealth of Independent States (formerly USSR).

Summary of Degree Requirements for BA Russian



1. Total hours	128.0
2. Major hours*	38.0
3. General Education requirements	53.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0-20.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	20.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in Russian and University Honors

I. University Honors: The Honors General Education graduation requirements as listed in the Honors Education section of this catalog.

II. Honors in Russian: In addition to Russian program requirements outlined above, students must complete:

- Honors Reading List (on literature, literary criticism, culture, and history of Russia) available from departmental offices; candidates will be examined on these works by one or more members of the Russian section.
- Two Russian Honors courses on Dostoevsky and Tolstoy.
- At least one semester of residency in Student Foreign Language Residence

and a summer or semester on an approved Study Abroad Program.

D. Honors thesis (Russian 499R, 3 hours)

BA Russian Teaching

See Russian in the Secondary Education section of this catalog. Advisement is available through the Department of Germanic and Slavic Languages and the College of Humanities and College of Education advisement centers.

Russian Minor

Complete 28 hours as follows: Russ 101, 102, 201, 202, 245; 311 or 312; 240, 441, or 442.

Russian (Russ)

Undergraduate Courses

100A. Beginning Russian, Slow Paced. (2:2:1)

Equals first half of Russ 101. For busy working people and others unable to devote as much time.

100B. Beginning Russian, Slow Paced. (3:3:1) Prerequisite: Russ 100A.

Equals second half of Russ 101.

101, 102. First Year Russian, Parts 1 and 2. (5:5:1 ea.)

185, 186. Russian for Reading. (2:2:0 ea.)

Basic language skills.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) Prerequisite: consent of both department chair and cooperative education coordinator.

On-the-job experience evaluated by supervisor and posted on student's transcript. Report required. Not applicable to major or minor.

201. Second Year Russian, Part 1. (5:5:1) Prerequisite: Russ 102 or instructor's consent, based on prior Russian language experience. Grammar review and conversation.

202. Second Year Russian, Part 2. (5:5:1) Prerequisite: Russ 201 or instructor's consent. Grammar review and discussion in Russian of both expository and literary readings. Culminating course for GE Foreign Language requirement.

211R. Second-Year Conversation. (1-5:Arr.:Arr. ea.) Prerequisite: Russ 201 or foreign residence experience.

Intermediate listening comprehension and speaking skills. Offered only as credit by examination upon completion of Russ 330.

240. Russian Literature in Translation. (3:3:0)

Survey of nineteenth- and twentieth-century Russian literature, including Pushkin, Lermontov, Gogol, Turgenev, Tolstoy, Dostoevsky, Chekhov, Pasternak, and Solzhenitsyn.

241. Dostoevsky in Translation. (3:3:0)

Survey of the major writings, including *Crime and Punishment*, *The Idiot*, *The Devils*, and *The Brothers Karamazov*.

242. Tolstoy in Translation. (3:3:0)

Survey of the major writings, including *War and Peace*, *Anna Karenina*, "The Death of Ivan Ilich," "A Confession," and other works.

245. Cultural Survey of Russia. (3:3:1)

Study in English of Slavic culture, emphasizing Russia.

311R, 312. Intermediate Conversation. (2:2:1 ea.) Prerequisite: Russ 202 or instructor's consent.

Discussion in Russian of Slavic culture.

321, 322. Third Year Russian, Parts 1 and 2. (3:3:0 ea.) Prerequisite: for 321, Russ 202 or equivalent; for 322, Russ 321 or equivalent.

330. Cultural History of Russia. (3:3:1) Prerequisite: Russ 201 or foreign residence experience.

For returned missionaries or others with extensive Russian language experience. Required course for obtaining language credit by examination (Russ 101, 102, 201, 211R). Culminating course for GE Foreign Language requirement.

399R. Cooperative Education. (1-9:0:0 ea.) Prerequisite: Russ 202 and departmental approval.

On-the-job experience in Russian-related areas. Not applicable to any Russian major or minor. Report required.

411, 412. Advanced Conversation. (2:2:1 ea.) Prerequisite: Russ 202 or instructor's consent.

Advanced conversation and listening comprehension.

441. Survey of Russian Literature in the Nineteenth Century. (3:3:0) Prerequisite: Russ 202 or equivalent.

Reading, discussing, and writing about Russian literature in Russian.

442. Survey of Russian Literature in the Twentieth Century. (3:3:0) Prerequisite: Russ 202 or equivalent.

Reading, discussing, and writing about Russian literature in Russian.

490R. Special Studies in Russian. (1-3:Arr.:0 ea.) Prerequisite: instructor's consent.

Variable credit for individual or group study as approved for special circumstances. Not applicable to Russian major or minor. Pass/fail only.

491. Senior Russian Proficiency Examination. (0:0:0) F

All majors are required to register for 491 in the semester they plan to take the Senior Proficiency Examination. Fee.

499R. Honors Thesis (1-6:Arr.:Arr. ea.)

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

670R. Tutorial Internship in Russian. (1–3:0:0 ea.)

680R. Special Studies in Russian. (1–3:0:0 ea.)

690R. Seminar in Russian. (1–3:0:0 ea.)

699R. Master's Thesis. (1–9:0:0 ea.)

Serbo-Croatian Courses (SrbCr)

101A, B. First-Year Serbo-Croatian. (2:3:1 ea.)
Basic language skills.

102. First-Year Serbo-Croatian. (4:5:1)
Prerequisite: SrbCr 101.
Continuation of SrbCr 101A, B.

201. Second-Year Serbo-Croatian. (4:5:1)
Prerequisite: SrbCr 102 or foreign residence experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: SrbCr 201 or foreign residence experience.
Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: SrbCr 211R or foreign residence experience.

330. Cultural History of Yugoslavia. (3:3:1)
Prerequisite: SrbCr 201 or foreign residence experience.

For returned missionaries or others with extensive Serbo-Croatian language experience. Required course for obtaining language credit by examination (SrbCr 101, 102, 201, 211R). Culminating course for GE Foreign Language requirement.

Ukrainian Courses (Ukrai)

101, 102. First-Year Ukrainian. (4:5:1 ea.)
Basic language skills.

201. Second-Year Ukrainian. (4:5:1)
Prerequisite: Ukrai 102 or instructor's consent.
Grammar review and conversation.

211R. Second-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: Ukrai 201 or foreign residence experience.
Intermediate listening comprehension and speaking skills.

330. Cultural History of the Ukraine. (3:3:1)
Prerequisite: Ukrai 201 or foreign residence experience.

For returned missionaries or others with extensive Ukrainian language experience. Required course for obtaining language credit by examination (Ukrai 101, 102, 201, 211R). Culminating course for GE Foreign Language requirement.

Scandinavian Studies

Minor

Complete 13–14 hours of Scandinavian courses as follows: 401, one course from 441–447, and an additional 6–7 hours from 344R, 490R, 529, 590R, 670R, 680R, 690R, Hist 337, Scand 441–447 (one additional course).

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Scandinavian Studies (Scand)

Undergraduate Courses

344R. Topics in Scandinavian Studies. (3:3:0 ea.)

Topic varies. Typical topics might be folklore, culture, music, film, emigration, art and design, political and economic problems, literature in translation, etc.

+History 377. Scandinavian History. (3:3:0)

401. Cultural History of Scandinavia. (3:3:0)
Scandinavian culture from the Vikings to the present. Works may be read in English translation.

441. Danish Literature. (3:3:0) Prerequisite: reading knowledge of Danish.

Readings from the best Danish literature. Introduction to basic literary concepts.

443. Norwegian Literature. (3:3:0)
Prerequisite: reading knowledge of Norwegian.

Readings from the best Norwegian literature. Introduction to basic literary concepts.

445. Swedish Literature. (3:3:0) Prerequisite: reading knowledge of Swedish.

Readings from the best Swedish literature. Introduction to basic literary concepts.

447. Finnish Literature. (3:3:0) Prerequisite: reading knowledge of Finnish.

Readings from the best Finnish literature. Introduction to basic literary concepts.

490R. Seminar in Scandinavian Studies. (1–3:3:0 ea.) Prerequisite: instructor's consent.

Topics vary.

Advanced Undergraduate or Graduate Course

529. Old Norse—Icelandic. (3:3:0)
Recommended: knowledge of a modern Scandinavian language.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

670R. Tutorial Internship in Scandinavian. (1–3:0:0 ea.)

680R. Special Studies in Scandinavian. (1–3:0:0 ea.)

690R. Seminar in Scandinavian. (1–3:0:0 ea.)

699R. Master's Thesis. (1–6:0:0 ea.)

Danish Courses (Dansk)

101, 102. First-Year Danish. (4:5:1 ea.)
Basic language skills.

201. Second-Year Danish. (4:5:1)
Prerequisite: Dansk 102 or equivalent experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: Dansk 102 or equivalent experience.

Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: Dansk 211R or equivalent experience.
Advanced conversational skills.

Finnish Courses (Finn)

101, 102. First-Year Finnish. (4:5:1 ea.)
Basic language skills.

201. Second-Year Finnish. (4:5:1)
Prerequisite: Finn 102 or equivalent experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: Finn 102 or equivalent experience.

Intermediate listening comprehension and speaking skills.

301. Finnish Cultural History and Literature. (3:3:0) Prerequisite: Finn 201 or equivalent.

311R. Third-Year Conversation. (1–5:Arr.:Arr. ea.) Prerequisite: Finn 211R or equivalent experience.
Advanced conversational skills.

Icelandic Courses (Iclnd)

101, 102. First-Year Icelandic. (4:5:1 ea.)
Basic language skills.

201. Second-Year Icelandic. (4:5:1)
Prerequisite: Iclnd 102 or equivalent experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing writing.

211R. Second-Year Conversation.
(1-5:Arr.:Arr. ea.) Prerequisite: Iclnd 102 or equivalent experience.

Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation.
(1-5:Arr.:Arr. ea.) Prerequisite: Iclnd 211R or equivalent experience.

Advanced conversational skills.

Norwegian Courses (Norwe)

101, 102. First-Year Norwegian. (4:5:1 ea.)
Basic language skills.

201. Second-Year Norwegian. (4:5:1)
Prerequisite: Norwe 102 or equivalent experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation.
(1-5:Arr.:Arr. ea.) Prerequisite: Norwe 102 or equivalent experience.

Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation.
(1-5:Arr.:Arr. ea.) Prerequisite: Norwe 211R or equivalent experience.

Advanced conversational skills.

Swedish Courses (Swed)

101, 102. First-Year Swedish. (4:5:1 ea.)
Basic language skills.

201. Second-Year Swedish. (4:5:1)
Prerequisite: Swed 102 or equivalent experience.

Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation.
(1-5:Arr.:Arr. ea.) Prerequisite: Swed 102 or equivalent experience.

Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation.
(1-5:Arr.:Arr. ea.) Prerequisite: Swed 211R or equivalent experience.

Advanced conversational skills.

399R. Cooperative Education Internship.
(1-6:0:0 ea.) Prerequisite: consent of department.

Greek

See Humanities, Classics, and Comparative Literature.

Health Sciences

Keith J. Karren, Chair (213 RB)

Professors

Burgener, O. Robert (1964) BS, Utah State U., 1953; MPH, U. of California, Berkeley, 1964; PhD, U. of Utah, 1972.

Hafen, Brent Q. (1969) BS, MS, U. of Utah, 1963, 1965; PhD, Southern Illinois U., 1969.

Heiner, Steven W. (1969) BS, MS, EdD, U. of Utah, 1955, 1962, 1969.

Karren, Keith J. (1971) BS, MS, Brigham Young U., 1969, 1970; PhD, Oregon State U., 1975.

Rhodes, Ronald L. (1962) BS, Elmhurst Coll., 1957; MS, Brigham Young U., 1962; PhD, Oregon State U., 1971.

Rollins, L. McKay (1962) BS, MS, Brigham Young U., 1961, 1962; PhD, U. of Utah, 1971.

Thygerson, Alton L. (1967) BS, MHEd, EdD, Brigham Young U., 1962, 1965, 1969.

Associate Professors

Hirschi, Willard M. (1964) BS, Brigham Young U., 1956; MA, Arizona State U., 1960.

Hurley, D. Richard (1971) BS, MS, Brigham Young U., 1963, 1964; PhD, Southern Illinois U., 1971.

James, Sherald W. (1962) BS, MS, Brigham Young U., 1956, 1962.

Tuckett, Glen C. (1959) BS, U. of Utah, 1953; MS, EdD, Brigham Young U., 1962, 1975.

Assistant Professors

Coon, Paul E. (1972) BS, MS, Brigham Young U., 1968, 1972.

Petersen, Ray A. (1969) BS, MHEd, Brigham Young U., 1960, 1965.

Salazar, Richard D. (1963) BS, MS, Brigham Young U., 1958, 1962; PhD, Southern Illinois U., Carbondale, 1972.

Emeriti

Robison, Clarence F. (1948) BS, Brigham Young U., 1949; MS, U. of Michigan, 1954.

Watters, Ray (1957) BS, MS, Utah State U., 1948, 1950; DHS, Indiana State U., Bloomington, 1960.

Programs and Degrees

BS Health Sciences
MS Health Sciences

Undergraduate study in the Health Sciences Department prepares students for a wide range of career opportunities and opens the way for advanced studies at the graduate level. Health sciences today comprise a collection of specializations leading to

positions as school or community health educators, environmental and occupational health specialists, or health promotion professionals in the public and private sectors. Decisions on options within the various specialty areas usually need not be made until the sophomore year, or, in some cases, the junior year. Students may choose to pursue a broad health sciences education as undergraduates and then specialize in an area of major interest at the graduate level.

Major programs must be established through consultation with an assigned advisor from the Department of Health Sciences. Transfer credits from other universities will be evaluated by the Health Sciences Department.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

No D grades may be applied to any major or minor.

BS Health Sciences

I. Core curriculum required for all options *except* environmental health and occupational health and safety: Hlth 300 (entry class for health sciences majors to be taken during first semester), 320, 325, 365, 370, 449R (A,B), 460, 461, 463, 465.

II. In addition to the core requirements, one of the following five emphases:

A. School Health Education Emphasis

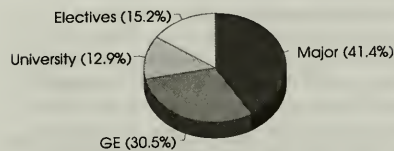
The health teaching emphasis is designed to prepare students to become health educators in secondary schools. See Health Sciences in the Secondary Education section of this catalog.

B. Community Health Education Emphasis

The community health education emphasis prepares students to work in a public health department or private health agency for the purpose of motivating the public to improve personal and community health skills. The community health education concept entails the art and science of preventing disease, prolonging life, and improving human efficiency through organized community efforts. The process of closing the gap between knowledge and behavior is emphasized.

1. Required: Hlth 381, 431R, 451, 478, 599R, Zool 261 (Chem 101), ISys 301, Comms 150, 311, Comms 235 or Soc 358, Stat 221 or Soc 205, IS 376R.
2. Elective (6-hour minimum): Psych 361, 365, PISc 311, 330, Mcbio 221-222, BusM 340, Hlth 480.

Summary of Degree Requirements for Community Health Education Emphasis



1. Total hours 128.0
2. Major hours ♦ 53.0
3. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
4. Advanced Math/Foreign Language 6.0
5. Advanced Writing 3.0
6. University requirements 16.5
7. Religion 14.0
8. PE/Health 2.5
9. Elective hours 19.5
10. 40 hours upper-division GPA requirement of 2.0
11. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
12. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

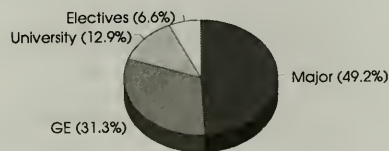
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

C. Health Promotion Emphasis

This curriculum provides professional course work in fitness and health for persons establishing business or seeking employment in business, industry, and other settings as health promotion program staff, directors, or consultants.

1. Required: Hlth 420, 425, 455, 466, 599R, PE 360, 363, FSN 410, BusM 300, OrgB 320 or 347, Acc 200.
2. Elective (8-hour minimum): OrgB 417, BusM 340, EPsy 546, Hlth 431R, 503R, PE 362, 568, Dance 336, RMYL 570, Comms 150, ISys 376R.

Summary of Degree Requirements for Health Promotion Emphasis



1. Total hours 128.0
2. Major hours ♦ 63.0
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0

Advanced Math/Foreign Language

1. Language 7.0
2. Advanced Writing 3.0
3. University requirements 16.5
4. Religion 14.0
5. PE/Health 2.5
6. Elective hours 8.5
7. 40 hours upper-division GPA requirement of 2.0
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

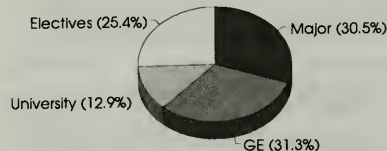
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

D. Family Health Emphasis

The emphasis in family health is designed for those interested in developing understandings and skills directed toward prevention and management of health problems in the family setting. The curriculum emphasizes maintaining health through greater reliance on family resources and consistent application of health-promoting principles and practices. The emphasis is not directed toward a specific employment market.

1. Required: FamSc 210, 303, Nurs 288, FSN 100, RMYL 315, Hlth 436.
2. Elective (7-hour minimum): Hlth 451, 466, FamSc 160, 304, Soc 389.

Summary of Degree Requirements for Family Health Emphasis



1. Total hours 128.0
2. Major hours ♦ 39.0
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
4. Advanced Math/Foreign Language 7.0
5. Advanced Writing 3.0
6. University requirements 16.5
7. Religion 14.0
8. PE/Health 2.5
9. Elective hours 32.5
10. 40 hours upper-division GPA requirement of 2.0
11. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
12. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

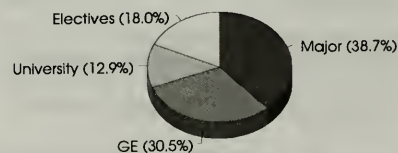
E. Environmental and Occupational Health and Safety Emphasis

The environmental and occupational health and safety emphasis will prepare students to work with public or private agencies and industry, to recognize and evaluate health and safety hazards in the work or community environment, to recommend corrective procedures, and to implement preventive programs.

Required core: Chem 105, 106, 107, 351, 352, Hlth 325, 425, 426, 430, 449R (A,B), 454, 478, 599R, Stat 221 or Soc 205, Zool 261, TecE 270, Phscs 105, 106, 107, 108.

1. Environmental Health Option requirements: Hlth 451, Mcbio 221, 222, PlSc 330, Zool 317 or 331.
2. Occupational Health Option requirements: Hlth 320, 335, 415, 431R, Mcbio 221, 222. No electives.
3. Occupational Safety Option requirements: Hlth 320, 335, 415, 420, 431R, CM 345. No electives.

Summary of Degree Requirements for Environmental and Occupational Health and Safety Emphasis



1. Total hours 128.0
2. Major hours ♦ 46-53.0
3. General Education requirements 39.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
4. Advanced Math/Foreign Language 6.0
5. Advanced Writing 3.0
6. University requirements 16.5
7. Religion 14.0
8. PE/Health 2.5
9. Elective hours 19.5-26.5
10. 40 hours upper-division GPA requirement of 2.0
11. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
12. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

★**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Gerontology Minor and Certification

The program has the following three major goals:

1. To encourage age-related research on the part of BYU faculty and other Church scholars.
2. To assist with development of educational programs and materials for the benefit of the elderly.
3. To provide technical assistance to Church and community leaders.

This program is designed for students from most academic disciplines. Credits taken may include course work counted in the student's major or minor field as appropriate.

For information on course sequences and elective options, contact director Steven Heiner, 229-L RB. Students must submit their list of electives for approval by the director.

Students may obtain a minor and certification in gerontology by completing 15 hours of the following courses:

- I. Core (6 or 7 hours): Hlth 466, 599R, RMYL 570,
- II. Electives: 6 hours from Soc 365/565, Comms 495/695, Hlth 580, Geog 501R (Seminar in Geography and Tourism), SocW 367/567; 3 hours from Hlth 320, 370, 460, Psych 322, RMYL 311, 470, 586, SocW 366.

Note 1: All students must maintain a GPA of at least 2.85 in course work applied to certification.

Note 2: Students may seek approval for other electives related to gerontology.

Minor and certification hours req.: 15

Health Education Minor

See Health Sciences in the Secondary Education section of this catalog for information about this teaching minor.

Driver Safety Education Minor

See Health Sciences in the Secondary Education section of this catalog for information about this teaching minor.

Health Sciences (Hlth)

Undergraduate Courses

10. Beginning Driver Education. (0:0:2)

Satisfies the prerequisite necessary to apply for the Utah driver's license. No driving experience necessary. Fee.

121. First Aid and Safety Instruction. (2:2:0)

Independent Study also.
Emergency procedures for sudden illness and traumatic injuries; leads to first aid and CPR certifications.

129. Health and Life-Style Management. (1:1:0)

Independent Study also.
Self-responsibility approach to health and wellness. Meets university graduation requirement.

130. Health and Life-Style Management. (2:2:0)

Independent Study also.
Comprehensive focus on knowledge and skills needed for health and wellness. Meets university graduation requirement.

201. Drug Education for Intercollegiate Athletes (1:Arr:0)

Physiological, sociological, and legal implications of drug use among intercollegiate athletes.

300. History, Philosophy, and Foundations of Health. (2:2:0)

Independent Study also.
Entry class for all health sciences majors. Principles of the discipline and preparation for professional service. Theoretical models of health, professional and ethical issues, and future trends.

320. First Aid and Emergency Care. (3:3:0)

In-depth coverage of first aid procedures for injuries and sudden illness. Leads to first aid and CPR certifications.

325. Safety Education. (2:2:0)

Independent Study also.
Magnitude of the injury problem; concepts for injury prevention; safety instruction.

335. Physical Hazards Control and Fire Protection. (2:2:0)

Physical hazards in the work environment and methods of fire prevention and control.

361. School Health for Elementary Teachers. (2:2:0)

Independent Study also.
Health for the elementary teacher, emphasizing his or her role as a health educator; appraisal of health problems of the elementary student.

362. School Health for Secondary Teachers. (2:2:0)

Independent Study also.
Certification course. Fundamental principles; adolescent health problems.

365. Modifying Health Behavior. (2:2:0)

Positive emotional health; attitude and behavior modification. Changing negative health behavior to positive.

370. Consumer Health. (2:2:0)

Independent Study also.
Current consumer health issues; selecting proper health products, services, and information; sources of consumer health protection.

381. Health Science Teaching Methods. (2:2:0)

Teacher and student activities required for conceptual learning in health science.

402R. Driver and Safety Education Workshop. (1-7:0:2 ea.)

Independent Study also.
Current safety education problems.

403R. Health Problems Workshop. (1-5:Arr:Arr:ea.)

415. Safety Program Management. (2:2:0)

Designing and implementing occupational safety programs.

420. Injury Prevention. (2:2:0)

Injury prevention programs dealing with back injuries, ergonomics, defensive driving, off-the-job injuries.

421. Secondary Health Education Curriculum. (2:2:0)

Prerequisite: Hlth 381.
Courses of study in health, with specific program planning and health course curriculum and content review.

425. Occupational and Industrial Health. (3:3:0)

Anticipation, recognition, evaluation, and control of health and safety hazards in the work environment.

426. Occupational and Industrial Health and Safety Lab. (1:0:1)

Instrumentation techniques in occupational health and safety.

430. Environmental Health. (3:3:0)

Prevalent environmental hazards as they affect people's health.

431R. First Aid Instructor Training and Recertification. (2:2:1 ea.)

Prerequisite: current first aid and CPR certification or Hlth 320.
First aid and CPR instructor training; leads to several instructor certifications; updates knowledge and skills.

436. Social Hygiene. (2:2:0)

Preparing prospective teachers to teach family life education as it relates to health. Sexual maturation, family health problems, parenthood, and other social hygiene factors.

444. Organization and Administration of Driver and Traffic Safety Education. (2:2:0)

Independent Study also.
Organization, administration, and supervision of high school driver education programs.

445. Driver and Traffic Safety Education. (4:2:4)

Prerequisite: Hlth 444.
Prepares students to teach classroom and behind-the-wheel phases of driver education.

446. Driver Simulators and Driving Ranges. (2:2:1)

Simulator and multiple-car driving range methodology, emphasizing operation and maintenance.

449R. Seminar in Professionalism, Senior Seminar. (0.5:1:0 ea.)

Professional and career characteristics of health-related professions.

451. Community Health. (2:2:0) Independent Study also.

Individual, school, and community involvement in preventing disease, improving human efficiency, and prolonging life.

452. Environmental Health Evaluation and Management 1. (2:2:0)

Comprehensive study of contemporary environmental health practices centered on food sanitation standards, insect and rodent control, housing, and institutional environments.

453. Environmental Health Evaluation and Management 2. (2:2:0)

Water procurement and quality standards, liquid waste treatment and disposal, water pollution control, and air quality management.

454. Environmental Health Evaluation and Management 3. (2:2:0)

Environmental toxicology and hazardous waste management.

455. Health Promotion. (3:3:0)

Management for effectively designing, marketing, implementing, and administering health promotion programs.

460. Substance Use and Addictive Behavior. (2:2:0) Independent Study also.

Physiological, psychological, sociological, and legal implications of drug use and addictive behaviors, emphasizing nature, cause, treatment, and prevention.

461. Health of the Body Systems. (3:3:0) Prerequisite: Zool 261.

Advanced course in health problems dealing with the major factors in health and disease as they affect the several body systems.

463. Health Protection and Management. (3:3:0)

Management approach to cause and nature of health deterioration; emphasizes health enhancement, disease prevention, and stress management.

465. Health Crisis Intervention. (2:2:0) Independent Study also.

Intervention techniques applied to health crises such as death and dying, suicide, grief and mourning, euthanasia, child abuse, abortion, and sexual assault.

466. Health and the Aging Process. (2:2:1) Independent Study also.

Theories of aging as a normal process, as a pathological process; health promotion and extension of life.

475. Health Assessment and Evaluation. (2:2:0)

Utilizing health assessment instruments, equipment, and software for managing health promotion programs.

478. Epidemiology for Health. (2:2:0) Prerequisite: Mbio 221 or instructor's consent.

Applying analytical tools to study acute and chronic disease prerequisite to disease control.

480. International Health. (2:2:0)

Health values, beliefs, and practices of other cultures, emphasizing how these beliefs and practices affect health and well-being.

Advanced Undergraduate or Graduate Course

599R. Cooperative Education. (1-9:Arr.:Arr. ea.) Prerequisite: completion of a major in health sciences or graduate student status in health sciences.

On-the-job experience.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

603R. Health Problems Workshop. (1-7:0:3 ea.)

650. Review and Processing of Health Information. (3:3:0)

651. Community Organization for Health. (2:2:0)

652. Health Education Program Planning. (2:2:0)

661. Curriculum Development and Instructional Design. (2:2:0)

665. Health Psychology. (2:2:0)

671. Graduate Practicum. (1:1:0)

692. Research Methods in Health Sciences. (3:3:0)

694. Graduate Seminar in Health Sciences. (2:2:0)

696R. Independent Studies. (1-3:Arr.:Arr. ea.)

698R. Master's Project. (1-4:Arr.:Arr. ea.)

699R. Master's Thesis. (1-9:Arr.:Arr. ea.)

796R. Individual Research and Study. (1-9:0:0 ea.)

799R. Doctoral Dissertation. (1-12:0:0 ea.)

Hindi

See Asian and Near Eastern Languages.

History

Paul B. Pixton, Chair (323 KMB)

Professors

Alexander, Thomas G. (1964) A.S., Weber Coll., 1955; BS, MS, Utah State U., 1960, 1961; PhD, U. of California, Berkeley, 1965.

Britsch, R. Lanier (1966) BA, MA, Brigham Young U., 1963, 1964; PhD, Claremont Graduate School, 1967.

Cardon, Louis B. (1960) BA, U. of Arizona, 1950; MA, PhD, U. of California, Berkeley, 1957, 1965.

Flammer, Philip M. (1973) BS, Utah State U., 1953; MA, George Washington U., 1958; PhD, Yale U., 1963.

Fox, Frank W. (1971) BA, MA, U. of Utah, 1966, 1969; PhD, Stanford U., 1973.

Gowans, Frederick R. (1972) BS, MS, PhD, Brigham Young U., 1960, 1963, 1972.

Green, Arnold H. (1985) BA, California State U., Los Angeles, 1965; MA, Brigham Young U., 1967; PhD, U. of California, Los Angeles, 1973.

Hill, Marvin S. (1966) BA, MA, Brigham Young U., 1955, 1955; PhD, U. of Chicago, 1968.

Marlow, H. Carleton (1964) BS, MS, Brigham Young U., 1958, 1959; PhD, U. of Oklahoma, 1966.

Montgomery, David C. (1970) BA, Brigham Young U., 1961; MA, PhD, Indiana U., Bloomington, 1966, 1971.

Pixton, Paul B. (1974) BA, MA, U. of Utah, 1965, 1967; PhD, U. of Iowa, 1972.

Thorp, Malcolm Ray (1969) BS, MA, Brigham Young U., 1964, 1967; PhD, U. of Wisconsin, Madison, 1972.

Tobler, Douglas F. (1967) BA, MA, Brigham Young U., 1961, 1962; PhD, U. of Kansas, 1967.

Walker, Ronald W. (1980) BS, MA, Brigham Young U., 1961, 1965; MS, Stanford U., 1968; PhD, U. of Utah, 1977.

Warner, Ted J. (1962) BS, MS, Brigham Young U., 1955, 1958; PhD, U. of New Mexico, 1963.

Associate Professors

Bohac, Rodney D. (1983) BA, U. of Nebraska (1974); MA, PhD, U. of Illinois, 1975, 1982.

Chandler, David Lee (1970) BS, Brigham Young U., 1963; MA, PhD, Tulane U. of Louisiana, 1965, 1972.

Harline, Craig E. (1992) BA, Brigham Young U., 1980; MA, PhD, Rutgers, 1984, 1986.

Holmes, Blair R. (1971) BA, Brigham Young U., 1966; MA, PhD, U. of Colorado, 1968, 1972.

Hebrew

See Asian and Near Eastern Languages.

- Kenzer, Robert C. (1982) BA, U. of California, Santa Barbara, 1976; MA, PhD, Harvard U., 1977, 1982.
- Madsen, Carol Cornwall (1980) BA, MA, PhD, U. of Utah, 1957, 1977, 1985.
- Pratt, David H. (1966) BA, MA, Brigham Young U., 1963, 1969; PhD, U. of Nebraska, Lincoln, 1975.
- Richards, Mary Stovall (1983) BA, Brigham Young U., 1973; AM, PhD, U. of Chicago, 1976, 1983.
- York, Neil Longley (1977) BA, MA, Brigham Young U., 1973, 1975; PhD, U. of California, Santa Barbara, 1978.

Assistant Professors

- Bradley, Martha S. (1991) BA, U. of Utah, 1974; MA, Brigham Young U., 1981; PhD, U. of Utah, 1987.
- Cannon, Brian Q. (1992) BA, Brigham Young U., 1984; MA, Utah State U., 1986; PhD, U. of Wisconsin, 1992.
- Fox, William (1966) BS, MA, EdD, Brigham Young U., 1962, 1966, 1983.
- Hamblin, William J. (1990) BA, Brigham Young U., 1978; MA, PhD, U. of Michigan, 1981, 1985.
- Haslam, Gerald M. (1991) BA, MA, U. of Utah, 1972, 1974; PhD, Brigham Young U., 1981.
- Westover, V. Robert (1971) BA, MA, PhD, Arizona State U., 1965, 1968, 1979.

Instructors

- Allen, J. Michael (1990) BA, Brigham Young U., 1981; MA, U. of California, Berkeley, 1985; ABD, U. of Washington.
- Pearcy, Thomas L. (1991) BA, MA, Purdue U., 1985, 1987; ABD, U. of Miami.
- Wright, David C. (1992) BA, Brigham Young U., 1987; MA, ABD, Princeton, 1991.

Emeriti

- Addy, George M. (1957) BA, MA, Brigham Young U., 1948, 1950; PhD, Duke U., 1957.
- Allen, James B. (1963) BS, Utah State U., 1954; MA, Brigham Young U., 1956; PhD, U. of Southern California, 1963.
- Arrington, Leonard J. (1972) BA, U. of Idaho, 1939; PhD, U. of North Carolina, Chapel Hill, 1952.
- Hyer, Paul V. (1957) BA, Brigham Young U., 1951; MA, PhD, U. of California, Berkeley, 1953, 1960.
- Jagchid, Sechin (1972) BA, PhD, Peking U., China, 1937, 1939.
- Jensen, De Lamar (1957) BA, Brigham Young U., 1952; MA, PhD, Columbia U., 1953, 1957.
- Johansson, Carl-Erik (1969) BA, MS, Brigham Young U., 1967, 1973.
- Wood, Joseph S. (1967) BS, PhD, U. of Utah, 1939, 1967.
- Wright, Norman Edgar (1964) BS, Brigham Young U., 1956; MAG, Utah State U., 1958.

The following persons in other departments have also been granted academic rank by the Department of History:

Baker, Legrand (Lee Library) Assistant Professor

- Embry, Jessie (Charles Redd Center) Instructor
- Hall, John F. III (Humanities, Classics, and Comparative Literature) Associate Professor
- Hartley, William G. (Joseph Fielding Smith Institute for Church History) Research Assistant Professor
- Whittaker, David J. (Lee Library) Associate Professor

Programs and Degrees

- BA Family History–Genealogy
- BA History
- BA History Teaching
- BA Honors in History and University Honors
- Cert Family History–Genealogy
- MA History
- PhD History

History stands at the heart of a liberal arts bridge between the humanities and social sciences. Historical understanding is thus basic to the life of an educated human being. As such, it is the ideal major for the student who wants the broad educational background for entrance into professions such as law, government service, or business, or who wants a liberal arts education. History can also be valuable training for someone who plans to teach.

In recognition of the broad range of uses to which historical education can be put, the field of public history has emerged in recent years. Today, people whom others would consider bankers, lawyers, corporate executives, or public servants view themselves as historians—public historians. They are the people with analytical skills provided by their historical education who work outside the university but who consider themselves historians by virtue of the value of the training they have received. A significant percentage of the jobs listed by firms and agencies with BYU's Employment Office specify no major. Many of these will be taken by public historians anxious to serve their employers with the valuable skills learned in their history major.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

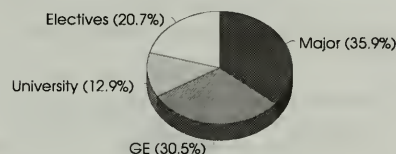
BA Family History–Genealogy

- I. Required courses:
- A. Hist 120, 200; 326 or 398; 328 or Geog 493R or Soc 205; Hist 397R, 400R, 405; 9 hours from 406R, 407R, 408R, 409R; 480R, 485, 490; 5 hours from 496R; one additional class selected in consultation with family history coordinator.

- B. Requirements that also fill GE electives: RelC 261; 2 hours from 262, 263, 264, 265, or 266; Hist 121, 201, 202.

II. No D credit will be accepted.

Summary of Degree Requirements for BA Family History–Genealogy



- | | |
|--|-------|
| 1. Total hours | 128.0 |
| 2. Major hours ♦ | 46.0 |
| 3. General Education requirements | 39.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 6.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 26.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Certificate in Family History–Genealogy.

Consisting of 16 hours, the certificate will state the student's geographic area of concentration: 2 hours from RelC 262, 263, 264, 265, or 266; Hist 400R; 9 hours from 406R, 407R, 408R, or 409R; 2 hours from 480R or 496R. The certificate program can help prepare for certification or accreditation but should not be confused with these two separate, private methods of qualifying professional genealogists.

BA History

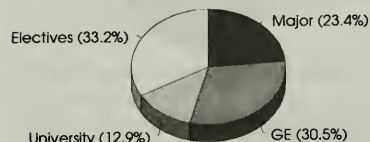
- I. Required: Hist 120, 121, 200, 201, 202, 485, 490.
- II. Recommended: Phil 105, Engl 315, Econ 110, Hist 328.
- III. Recommended GE courses: Arts and Letters: Art 111, 211, 213; ClCv 110; Engl 230, 251, 333; Hum 101, 201, 202; Asian-Hum 240; Phil 201, 202, 205. Natural Sciences: Botny-Zool 250; Geog 101; Phscs 314.
- IV. Students may study various areas of history, but they must not present all their preparation in a single area. At least one

class must be chosen from *each* of three of the following areas: Asia or the Near East, Europe, Latin America, or the United States.

V. Additional history classes selected in consultation with department advisor.

VI. No D credit will count toward major requirements.

Summary of Degree Requirements for BA History



1. Total hours	128.0
2. Major hours *	30.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	42.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor in History

Hist 120, 121, 200, 201, 202, and enough upper-division classes to total 21 hours.

BA History Teaching

See History in the Secondary Education section of this catalog.

BA with Honors in History and University Honors

I. Honors Program requirements:

- A. The Honors General Education graduation requirements as listed in the Honors Education section of this catalog. Hist 201H, 202H, or the colloquium "World Civilization: Great Ideas and Values" are the recommended History of Civilization tracks; students should consult with the History Department's Honors Program advisor.

B. GE: In addition to required courses in Arts and Sciences for the non-Honors student, Phil 110H, Econ 110H, Hum 201, 202, PISc 110 or 150, and Soc 111 are recommended beyond the Honors core.

II. Honors major requirements: Students will not be permitted to take any 300-level or higher course before completing the History of Civilization sequence and Hist 121 and 200. Consult with the History Department's Honors Program advisor.

- A. Course requirements: Hist 121, 200; 302, 304, or 311 (304 recommended); 312 or 313; 319 or 320; 340 or 341; 351 or 352; 368 or 382; 372 or 388; 387, 485 (must be taken during junior year); 494H (must be taken during senior year).
- B. Thesis requirement: Hist 499R, 4 hours minimum (must be taken during senior year).
- C. Oral defense of thesis and examination on Honors "Masterworks of Art and Literature."
- D. Additional requirements: See the department or the Honors Program Office.

History (Hist)

Undergraduate Courses

120. The United States Through 1877. (3:3:0) Independent Study also.

Discovery, colonization, American Revolution, establishment of the Constitution, foreign affairs, westward expansion, sectionalism, Civil War, and reconstruction.

121. The United States Since 1877. (3:3:0) Independent Study also.

Industrialization, urbanization, imperialism, progressivism, world wars, New Deal, and current problems.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

200. The Historian and His Craft. (3:3:0)

History within the broader framework of liberal education; nature of history; questions historians ask; skills and resources needed to study, understand, and write history.

201. World Civilization to 1500. (3:3:0)

Honors and Independent Study also.

World civilization from Greek antiquity to Renaissance; explores fundamental questions in the human experience, examines formative events in history, and seeks to develop understanding of value of important texts.

202. World Civilization from 1500. (3:3:0) Honors and Independent Study also. Prerequisite: Hist 201.

World civilization from Renaissance to present; explores fundamental questions in the human experience, examines formative events in history, and seeks to develop understanding of value of important texts.

207. Federal Indian Policy. (3:3:0)

History and development of interrelationship of the federal government and the Native American in the United States.

223. Introduction to Indian Education. (3:3:0) Prerequisite: NAS 101.

Learning difficulties of language and culture and awareness of government title programs.

250. Popular Culture in America. (3:3:0)

Life and culture in America; the American character and its relationship to popular cultural themes.

285. World War II. (3:3:0)

Causes, battles, and effects of this most global and massive of man's wars.

300. Ancient Near East. (3:3:0)

Ancient Egypt, Mesopotamia, Palestine, and Persia from ca. 3500 B.C. to A.D. 600.

302. Medieval and Modern Near East. (3:3:0)

Rise and spread of Islam during the period of the Caliphate; Ottoman Empire; Western imperialism; rise of national states.

303. Jewish History: 70 A.D. to the Present. (3:3:0)

Jewish diaspora, Jewish life in Moslem and Christian countries; Jewish religious movements; development of Zionism; Jewish communities in modern Israel and the United States.

304. (Hist-CICv) Greek History. (3:3:0)

Political, economic, social, and intellectual history of Greece from Mycenaean times to the Hellenistic period.

307. (Hist-CICv) Roman History. (3:3:0)

Political, economic, social, and intellectual history of Rome from the foundation of the city to Constantine.

308. History of African Civilizations: Traditional Society and Culture to 1800. (3:3:0)

Society, culture, and kingdoms of Black Africa before European rule; art, architecture, kings and courts, status of women.

309. Modern African History: 1800 to the Present. (3:3:0)

Rise of traditional kingdoms, impact of Christianity and Islam, European partition of Africa, colonial rule, nationalist movement, problems of independence, foreign policy, and intellectual life.

310. The Early Middle Ages. (3:3:0)

Decline of Rome and the early formative stages of early medieval civilization; analysis of political, economic, and social changes from A.D. 285 to 950.

311. The Late Middle Ages. (3:3:0)

Europe from 950 to 1350; maturation of medieval civilization; failure of German, success of French leadership; economic, religious, cultural, intellectual trends.

312. The Renaissance: Age of Transition. (3:3:0)

Literary and artistic reawakening of Italy and Europe; commercial revolution; rise of national monarchies.

313. The Reformation: Age of Turmoil. (3:3:0)

Sixteenth-century religious upheaval; ideological cultural, political, and socioeconomic struggles to mid-seventeenth century.

315. The Overseas Expansion of Europe. (3:3:0)

European expansion into Asia, Africa, and America; first colonial empires and their worldwide social, economic, and cultural impact.

316. Foundations of Modern Diplomacy. (3:3:0)

Emergence of national states and development of international diplomacy during its formative age from the Renaissance to the fall of Napoleon.

318. European Jews and the Holocaust. (3:3:0)

Attempted genocide of European Jews by Hitler's Third Reich; motives, methods, and results.

319. Ideas and Man in the Modern World. (3:3:0)

Interrelationship of influential ideas and historical events from the end of the eighteenth century to the present.

320. The Age of Enlightenment. (3:3:0)

Developments in Europe from 1650 to the French Revolution, emphasizing political thought, science, and philosophy in the Enlightenment.

321. War and Peace in the Modern World. (3:3:0)

Causes and nature of wars and conditions of durable peace, from Napoleonic Wars to Vietnam and Palestine, emphasizing world wars, cold war, and "détente."

322. Nineteenth-Century Europe. (3:3:0)

Political, economic, social, and intellectual history of Europe from 1815 to 1914.

323. Europe in the Twentieth Century. (3:3:0)

International affairs and political and economic history of major European countries (including Russia) from World War I to the present.

324. Communist China. (3:3:0)

Chinese Communist development from the 1920s to the present, emphasizing contemporary domestic affairs and foreign relations.

326. The Family in Europe. (3:3:0)

Independent Study also.
Nature and development of marriage and family life and structure from the ancient to modern era.

327. Society in Europe. (3:3:0)

Common life in Europe from 1500 to the present: family problems, social customs, marriage, superstition, death, diet, work, hardships, migration, and childhood.

328. Quantitative History. (3:3:0)

Introduction to theory, methods of quantitative history useful for teaching, research, public history, law, business. Workshops include procedures, computer analysis.

329. Austrian Empire. (3:3:0)

Historical survey (1526–1918) of area ruled by Hapsburg dynasty comprising lands and people of East-Central Europe.

330. Tsarist Russia. (3:3:0)

From early beginnings to the Russian Revolution.

331. Soviet and Post-Soviet Russia. (3:3:0)

Independent Study also.
Modern Russia, emphasizing the rise of communism and the development of the U.S.S.R. and the new commonwealth.

332. France. (3:3:0)

French history from Roman times to the present, emphasizing the French Revolution, Napoleon, and subsequent developments.

333. Modern Germany. (3:3:0)

Political, military, economic, and cultural development of Germany during the nineteenth and twentieth centuries.

334. Spain. (3:3:0)

Political, social, and economic factors in Spanish history, emphasizing the period since 1492.

335. English History to 1689. (3:3:0)

Independent Study also.
Political, social, and cultural developments from prehistoric times to the Glorious Revolution. Medieval, Tudor, and Stuart periods.

336. English History Since 1689. (3:3:0)

Emergence of Britain as a great colonial and industrial power, as well as more recent decline of Britain's influence. Emphasis also on cultural developments.

337. Scandinavian History. (3:3:0)

Political, social, religious, cultural, and economic factors in Denmark, Finland, Iceland, Norway, and Sweden from Viking era to present highly developed society.

338. History on Film and Video. (3:2:Arr.)

Prerequisite: Hist 201 or 202, preferably both. Recommended: upper-level courses in medieval and early modern European history.

Effectiveness of film and video as a medium of history; its strengths and weaknesses compared to traditional approaches. Special attention to works on European history.

340. Premodern Asia. (3:3:0)

Beginning of the traditional civilizations of China, India, and Japan, and their development until the coming of the West.

341. Modern Asia. (3:3:0)

Impact of the West on Asian societies; change of tradition, imperialism, nationalism, and communism in China, Japan, and India.

342. Korea. (3:3:0)

Political, religious, and cultural development from antiquity to the present.

343. Chinese Civilization. (3:3:0)

Development of China to 1500; social and cultural factors.

344. Modern China Since 1500. (3:3:0)

Developments since coming of the West; reform, movements, rebellion, rise of nationalism, and change of traditional institutions.

345. Premodern Japan. (3:3:0)

Development of Japan to 1868; social, religious, and cultural aspects.

346. Modern Japan. (3:3:0)

Development following Japan's opening in 1853; process and implications of modernization and expansion.

347. (Hist-NES) Arab and Islamic Civilization. (2:2:1)

Social science/humanities core course covering Arab and Islamic civilization; historical evolution of Middle East to present. Overview of modern Palestinian society. Offered at Jerusalem Center for Near Eastern Studies; elective credit for major and minor in Near Eastern Studies. Does not receive GE credit.

348R. Topics in Modern Near Eastern History. (3:3:0 ea.)

Closer examination of the history of appropriate delimited topic than possible in general survey course. Topics may include modern Islamic movements, modern Egypt, modern North Africa.

349. (Hist-NES) Jewish Civilization. (2:2:1)

Social science/humanities core course; broad introduction to Jewish self-understanding and history, focusing on relationships among people, faith, and land. Offered at Jerusalem Center for Near Eastern Studies. Does not receive GE credit.

350. History of Asian Religions and Thought. (3:3:0)

Development of Asia's religions and modes of thought and their influence on Asian and world history.

351. Conquest and Colonization of Latin America. (3:3:0)

Colonial period, geography, pre-Columbian civilization, conquest, and institutional development from 1492 to 1810.

352. Modern Latin America. (3:3:0)

National period (1810 to present): independence, institutional development, culture, and inter-American relations.

353. Mexico and the Caribbean. (3:3:0)

Social and economic trends since independence. Mexican Revolution and the Castro movement.

356. Brazil. (3:3:0)

From 1500 to present, focusing on national period.

357. The Indian in Latin American History. (3:3:0)

History of Latin American Indians from preconquest days to the present; achievements, contributions, and problems.

359. Inter-American Relations. (3:0:0)

Relations between the U.S. and Latin American republics since 1810; the Pan-American movement and recent period.

360. The Hispanic Southwest. (3:3:0)

Spanish exploration, occupation, and institutions of northern Mexico and the American Southwest, 1521–1821; Mexican period to 1848.

362. The American West to the Mexican War. (3:3:0)

Early colonization and westward movement east of the Mississippi.

363. The American West Since the Gold Rush. (3:3:0)

Fur trade and colonization in the trans-Mississippi West.

364. American Environmental History. (3:3:0)

American people's experience in responding to the environment; ideas, population, technology, urbanization, water, logging, industry, air, hunting, fishing, irrigation, etc.

366. Utah. (3:3:0) Independent Study also.

Contributions of native Americans, explorers, mountain men, Mormons, and gentiles to nineteenth century. Politics, economics, and social and cultural development in twentieth century.

367. History of the South. (3:3:0)

Political, economic, and cultural history of the southern states from colonial times to the present.

368. Mormonism in American History. (3:3:0)

Social, economic, political, intellectual, and religious environment in which Mormonism flourished; contributions of Mormon men and women to American culture and history.

369. The Indian in American History. (3:3:0)

Developments in the history of leading Indian tribes; relations with the United States government.

370. Colonial America. (3:3:0)

Establishment, growth, and development of the American colonies to 1763.

371. The Machine in America. (3:3:0)

Benefits and liabilities of technological complexity.

372. New American Nation. (3:3:0)

Causes and consequences of the American Revolution, the confederation era, and the framing of the Constitution.

373. History of Religion in the United States. (3:3:0)

Religious developments in America from colonial times to the present.

374. U.S. Diplomatic History. (3:3:0)

American diplomacy; trends and critical decisions of the twentieth century.

376. Jacksonian America, 1819–1848. (3:3:0)

Development of nationalism, sectionalism, and new political parties. Slavery, Indian policy, states' rights, expansion, and other economic and social forces that in time divided the Union.

377. Civil War. (3:3:0)

The Civil War as the test of the American political system and as a problem in historical causation.

379. United States Since 1945. (3:3:0)

Ideas and movements shaping American society; mentality, politics, diplomacy, and economy.

380. San Francisco. (3:3:0)

San Francisco as a microcosm of the American experience; art, architecture, environmentalism, politics, and ethnic diversity.

381. The Dynamics of War. (3:3:0)

Broad trends in technology, doctrine, leadership, operations, and military-societal relationships from early times to the present; focus on the American experience.

382. American Social History. (3:3:0)

Methods and issues of social history; family history, demography, elites, women, childhood and youth, immigrants, race, religion, urbanization, and social class.

384. Women and the American Experience. (3:3:0)

Survey course of women's experience in American culture and society from the Puritans to the present.

385. American Constitutional History to 1865. (3:3:0)

Development of constitutionalism: colonial, confederation, convention, judicial review, nationalism vs. sectionalism, and Civil War.

386. American Constitutional History Since 1865. (3:3:0)

Constitutional development: Reconstruction, due process, liberal nationalism, New Deal, war and the Constitution, and civil liberties.

387. Philosophies of History. (3:3:0)

Fundamental problems and types of historical analysis and interpretation, philosophies of history, and work of outstanding historians.

388. Life and Thought in America. (3:3:0)

Movements in social and political thought; major leaders and their times from 1607 to the present.

390R. Special Topics in History. (1–3:3:0 ea.) Independent Study also.

Presented by visiting or regular faculty. Varied topics include oral history, demographics, psychohistory, Christianity in history, etc.

392R. Special Topics in Latin American History. (3:3:0 ea.)

Varied topics include northern South America.

393R. Family History Research Abroad. (3:0:0 ea.)

394R. Special Topics in European History. (3:3:0 ea.)

395R. Special Topics in Asian History. (3:3:0 ea.)

Varied topics include South Asia, Christian missions in Asia, and Asiatic Russia.

396R. Special Topics in American History. (3:3:0 ea.)

Varied topics include U. S. presidents.

397R. Writing Family Histories. (3:3:0 ea.) Independent Study also.

Selecting themes and sources, and determining issues to be dealt with.

398. American Family History. (3:3:0)

Early settlement to the present.

399R. Cooperative Education. (1–9:0:0 ea.)

On-the-job experience for students working on internships, work study programs, and other appropriate, historically oriented activities (6 hours maximum toward major).

400R. Paleography. (3:3:0 ea.) Independent Study also.

Interpretation of hand writing in vernacular and Latin scripts from North America, Great Britain, and other European countries—sixteenth through eighteenth centuries.

401. American Community History. (3:3:0)

Sources and special background needed for writing history of a region, country, or town.

402. American Migration History. (3:3:0)

Patterns of settlement by ethnic groups in the westward movement.

403R. European Community History. (3:3:0 ea.)

Sources and methodology for writing history of a town or region; particular aspects of local history.

405. Family History and the Personal Computer. (3:3:0)

Genealogical software and the personal computer; use in applied research and family history writing.

406R. North American Family History. (3:3:0 ea.)

In-depth examination of sources and problem solving in North America.

—Northeastern States and Canada

—Midwestern States and Canada

—Southern States

—Native American

407R. British Family History. (3:3:0 ea.)

In-depth examination of sources and problem solving in Britain.

—England and Wales Since 1700

—England and Wales Before 1700

—Scotland and Ireland

408R. Scandinavian Family History. (3:3:0 ea.)

In-depth examination of sources and problem solving in Scandinavia.

—Denmark

—Norway and Iceland

—Sweden and Finland

409R. Germanic/Slavic Family History. (3:3:0 ea.)

In-depth examination of sources and problem solving in various Germanic- and Slavic-speaking countries.

422. Oral History Interviewing and Processing. (3:3:0) Independent Study also.

Oral methods of research and writing history; focus on family histories. Techniques of interviewing; transcribing and processing interviews. Creating historical documents.

430R. (Hist-Clscs) Topics in Greek and Roman History. (3:3:0 ea.) Prerequisite: Greek 201 (Greek topics) or Latin 201 (Roman topics).

Topics vary (e.g., rise of the Greek city-state, Greek political thought, classical historiography, Rome and the Etruscans, imperial Rome).

+Greek 430. Herodotus. (3:3:0)**+Latin 430. Livy.** (3:3:0)**440. Great Cities of the Western World.** (3:3:0)

Society, politics, culture, and art of selected cities (Paris, Vienna, Florence, Rome, New York, etc.) that have influenced the course of Western civilization.

457. American Indian Military Campaigns. (3:3:0)

Military campaigns of the Indians and the United States government on the western frontier.

477. Methods of Teaching. (3:3:0) For history teaching majors and minors. Prerequisite to ScEd 476R. Must be taken immediately prior to student teaching.

Effective methods of teaching history in secondary schools; historical content taught at the secondary school level.

480R. Seminar and Special Problems. (2:2:0 ea.) Independent Study also.

Practicum; solving genealogical problems in preparation for accreditation.

485. Junior Tutorial in History. (3:3:0)

Prerequisite: Hist 200.

Reading, discussing, and writing about selected historical issues.

489R. Travel Studies. (1–6:Arr.:Arr. ea.)**490. Historical Research and Writing.** (3:3:0) Prerequisite: Hist 200, 485.

Research seminar; critical, analytical, and writing skills in preparation of a historical essay. Required of all history majors.

494M. Global Perspectives in History. (3:3:0)

Senior-level Honors course; historical global issues from perspective of specific time frames and geographic settings.

495R. Directed Research. (3:0:0 ea.)

Student research directed by faculty member on topic of mutual interest. Prior approval of instructor required. Research assistants must do additional work for credit.

496R. Internship in Family History. (1–5:0:0 ea.)

Work with Department of History on various projects, under supervision of professional.

497R. Honors Readings. (1–3:0:Arr. ea.)**498R. Directed Readings.** (1–3:3:Arr. ea.) Independent Study also.**499R. Honor's Thesis.** (1–6:0:0 ea.)**Advanced Undergraduate or Graduate Courses****500R. Special Studies in History.** (1–3:3:0 ea.)

Directed by visiting or resident faculty. Check with department secretary for current topics and instructor.

561. Sources and Problems in Early America. (3:3:0)

Through the seventeenth and eighteenth centuries. Required of American and European history graduate students.

562. Sources and Problems in Nineteenth-Century America. (3:3:0)

Through the nineteenth century. Required of American and European history graduate students.

563. Sources and Problems in Twentieth-Century America. (3:3:0)

Through the twentieth century. Required of American and European history graduate students.

587. Philosophies of History. (3:3:0)

Fundamental problems and types of historical analysis and interpretation, philosophies of history, and work of outstanding historians.

590R. Special Topics. (3:3:0 ea.)

Western American, religious, family, Asian, Latin American, and Near Eastern history.

598R. Special Readings in History. (1–2:0:Arr. ea.)**Graduate Degree Courses**

See also the 1993–94 BYU Graduate Studies Catalog.

661. Sources and Problems in Medieval, Renaissance, and Reformation History. (3:3:0)**662. Sources and Problems in Early Modern Europe, 1550–1789.** (3:3:0)**663. Sources and Problems in Modern Europe, 1789–Present.** (3:3:0)**690R. Graduate Seminar in History.** (1–3:0:0 ea.)**695R. Coordinated Research.** (3:0:0 ea.)**696R. Practicum in Public History and Family History.** (1–5:0:0 ea.)**698R. Master's Project.** (1–6:Arr.:Arr. ea.)**699R. Master's Thesis.** (1–9:Arr.:Arr. ea.)**798R. Special Readings in History.** (1–2:0:Arr. ea.)**799R. Doctoral Dissertation.** (1–18:Arr.:Arr. ea.)**Native American Studies Minor**

Fred R. Gowans, Coordinator (316 KMB).

Many Indian and non-Indian students graduating from Brigham Young University in studies such as education, sociology, business, and political science will be brought into contact with the native American people because of the nature of their occupations.

The Native American Studies minor is designed to supplement students of various disciplines so that they may become more culturally aware of the heritage of the American Indian, thus promoting better understanding and cooperation.

The minor has been designed so that students may select classes from a variety of interdepartmental courses, if desiring a general background, or a combination of classes for an in-depth study in a specific discipline.

In connection with the American Studies program offered at Brigham Young University, students can obtain a major in American Studies, with course work designed to emphasize the native American.

Make application to or obtain further information from the coordinator.

Requirements

A total of 22 hours (in addition to a regular major) divided as follows:

Core Courses

English

395R (3) Eminent Authors and Themes in Literature—Native American

History

223 (3) Introduction to Indian Education
369 (3) The Indian in American History
490 (3) Senior Seminar

Native American Studies

101 (2) Introduction to Indian America

Elective Courses

Choose 8 hours from the following:

Anthropology

317 (3) Native Peoples of North America

Family History

406R (3) North American Family History

History

207 (3) Federal Indian Policy
362 (3) The American West to the Mexican War
363 (3) The American West Since the Gold Rush
457 (3) American Indian Military Campaigns
498R (1–3) Directed Readings

Native American Studies

111 (2) American Indian Art Appreciation
307 (3) Contemporary Issues in Indian America
369R (1–3) Special Topics

Political Science

341 (3) Indian Tribal Government and Politics

Native American Studies Courses (NAS)

101. Introduction to Indian America. (2:2:0)

Modular course surveying historical and contemporary Indian America: history, culture, language, literature, art, music, education, and current problems.

111. American Indian Art Appreciation. (2:2:0)

History and appreciation of functional and aesthetic aspects of Native American art forms, prehistoric to present.

307. Contemporary Issues in Indian America. (3:3:0)

Sociocultural factors that affect twentieth-century native Americans in both urban and reservation settings.

369R. Special Topics. (1–3:3:0 ea.)

Prerequisite: department approval.

Charles Redd Center for Western Studies

William A. Wilson, Director (4069 HBLL)

Chair Holder: Lemuel Hardison Redd, Jr., Professor of Western American History.
Alexander, Thomas G. (1964) AS, Weber Coll., 1955; BS, MS, Utah State U., 1960, 1961; PhD, U. of California, Berkeley, 1965.

Professor

Wilson, William A., Humanities Professor of Literature and Folklore, (1984) BA, MA, Brigham Young U., 1958, 1962; PhD, Indiana U., 1974.

Instructor and Oral History Program

Director

Embry, Jessie L. (1979) BA, MA, Brigham Young U., 1973, 1974.

Emeriti

Allen, James B. (1963) BS, Utah State U., 1954; MA, Brigham Young U., 1956; PhD, U. of Southern California, 1963.

Arrington, Leonard J., Lemuel Hardison Redd, Jr., Professor of Western American History.

Advisory Council

Alexander, Thomas G., Professor of History, BYU

Allen, James B., Professor of History, BYU
Backman, Milton V., Jr., Professor of Church History and Doctrine, BYU

Beecher, Maureen, Research Associate Professor, Joseph Fielding Smith Institute for Church History.

Christy, Howard A., Senior Editor, Scholarly Publications, BYU

Cornwall, Marie, Department of Sociology, BYU

Flake, Chad J., Senior Librarian, BYU

Gardner, John H., Professor of Physics and Astronomy, BYU

Jackson, Richard H., Professor of Geography, BYU

Janetski, Joel C., Assistant Professor of Anthropology, BYU

Leonard, Glen M., Director, Museum of Church History and Art

Magleby, David B., Associate Professor of Political Science, BYU

May, Dean L., Associate Professor of History, U of U

Mitchell, Regina, Salt Lake City, Utah

Peterson, Charles S., St. George, Utah.

Peterson, F. Ross, Professor of History and Director, Mountain West Center for Regional Studies, USU

Pope, Clayne L., Professor of Economics, BYU

Swenson, Sharon L., Assistant Professor of Theatre and Film, BYU

White, Jean B., Professor of Political Science, WSC

Activities of the Center

Established in January 1972 under an endowment from Charles Redd, a prominent Utah stockman and philanthropist, the Charles Redd Center for Western Studies is charged with promoting the study of all aspects of the American West. Programs of the center include conducting research on the American West, publishing a monograph series, sponsoring lectures and symposia, conducting an oral history program, assisting professional and student research through grants and fellowships, providing consultation services on oral history, and assisting public school students through the Utah History Fair. Center personnel also teach classes in academic departments on campus.

Joseph Fielding Smith Institute for Church History

Ronald K. Esplin, Director (127 KMB)

Research Professors

Beecher, Maureen Ursenbach (1980) BS, Brigham Young U., 1958; MA, PhD, U. of Utah, 1966, 1973.

Esplin, Ronald K. (1980) BA, U. of Utah, 1969; MA, U. of Virginia, 1970; PhD, Brigham Young U., 1981.

Jessee, Dean C. (1980) BA, MA, Brigham Young U., 1956, 1959.

Walker, Ronald W. (1980) BS, MA, Brigham Young U., 1961, 1965; MS, Stanford U., 1968; PhD, U. of Utah, 1977.

Associate Research Professors

Hartley, William G. (1980) BA, MA, Brigham Young U., 1965, 1969.

Jensen, Richard L. (1980) BA, Utah State U., 1968; MA, Ohio State U., 1972.

Madsen, Carol Cornwall (1980) BA, MA, PhD, U. of Utah, 1957, 1977, 1985.

Emeritus

Arrington, Leonard J. (1972) BA, U. of Idaho, 1939; PhD, U. of North Carolina, Chapel Hill, 1952; Honorary Doctor of Humane Letters, U. of Idaho, 1982; Honorary Doctor of Humanities, Utah State U., 1982.

The task of the Joseph Fielding Smith Institute for Church History is the scholarly study of the Latter-day Saint past. Its personnel are historians whose primary activity is writing and publishing for both a professional and a general Church audience. They also teach courses in history, Church history, literature, and other disciplines related to their fields of expertise, under the direction of the appropriate departments. The institute seeks to facilitate research by other scholars in Church history. Limited support for research and publication in Church history is available to faculty members from other departments within the university, based on an exchange of teaching and research assignments with institute faculty.

Home Economics

See Family Sciences.

Horticulture

See Agronomy and Horticulture.

Humanities, Classics, and Comparative Literature

John F. Hall, Chair (3010-A JKHB)

Professors

Bassett, Arthur R. (1972) BS, MRL, Brigham Young U., 1960, 1966; PhD, Syracuse U., 1975.

Britsch, Todd A., Associate Academic Vice President (1966) BA, Brigham Young U., 1962; MA, PhD, Florida State U., 1965, 1966.

Marshall, Donald R. (1971) BA, MA, Brigham Young U., 1960, 1965; PhD, U. of Connecticut, 1971.

Peer, Larry H. (1975) BA, MA, Brigham Young U., 1963, 1965; PhD, U. of Maryland, College Park, 1969.

Phillips, R. Douglas (1966) BA, Brigham Young U., 1962; MA, PhD, U. of Illinois, 1964, 1972.

Sondrup, Steven P., Ludwig, Weber, Siebach Professor of Literature (1973) BA, U. of Utah, 1968; MA, PhD, Harvard U., 1969, 1974.

Tate, George S. (1974) BA, MA, Brigham Young U., 1969, 1970; PhD, Cornell U., 1974.

Associate Professors

Butler, Terrell M. (1979) BA, Brigham Young U., 1969; MA, PhD, Cornell U., 1972, 1979.

Call, Michael J. (1983) BA, MA, Brigham Young U., 1971, 1976; PhD, Stanford U., 1982.

Davis, Harrison M. (1962) BS, MA, Utah State U., 1961, 1963.

Davis, Norma (1978) BA, MA, Brigham Young U., 1972, 1975.

Green, Jon D. (1970) BA, MA, Brigham Young U., 1966, 1968; PhD, Syracuse U., 1972.

Hall, John F. (1978) BA, Brigham Young U., 1975; MA, PhD, U. of Pennsylvania, 1978, 1984.

Lounsbury, Richard C. (1982) BA, U. of Calgary, Canada, 1970; MA, PhD, U. of Texas, Austin, 1972, 1979.

Shumway, Larry V. (1975) BA, Brigham Young U., 1960; MA, Seton Hall U., 1960; PhD, U. of Washington, 1974.

Assistant Professors

Duckwitz, Norbert H. O. (1969) BA, MA, Brigham Young U., 1969, 1972; AM, Harvard U., 1974; PhD, U. of Colorado, 1987.

Elwyn, Sue (1991) BA, Washington U., 1974; MA, PhD, U. of Pennsylvania, 1979, 1991.

MacFarlane, Roger T. (1989) BA, Brigham Young U., 1985; MA, U. of Michigan, 1987.

Instructor

Fisher, Deborah (1992) BA, MA, Brigham Young U., 1982, 1985.

Emeriti

Britsch, Ralph A. (1938) BA, MA, Brigham Young U., 1933, 1951.

Spears, Irene O. (1936) BA, Brigham Young U., 1929; MA, PhD, Stanford U., 1934, 1942.

Programs and Degrees**Humanities**

BA Humanities
(with major emphasis in art; English, Classical Studies, comparative, or foreign literature; history; music; or philosophy)

BA Honors in Humanities and University Honors

BA Humanities Composite Teaching
(with major emphasis in English, French, German, history, Japanese, Latin, Russian, or Spanish)

MA Humanities

Classics

BA Classical Studies

BA Latin Teaching

Comparative Literature

BA Comparative Literature

BA Honors in Comparative Literature and University Honors

MA Comparative Literature

Humanities, Classics, and comparative literature offer, collectively and individually, a rich liberal arts education, disciplined by insistence on substantial foreign language skills, critical thought, library skills, and writing—a combination that makes any one of the department's majors an excellent preparation for graduate work in humanistic disciplines and professional schools and for a wide range of employment, including secondary teaching in humanities or Latin.

Advisement

Faculty members are eager to consult with majors as well as those contemplating humanities, Classics, or comparative literature as a major. Routine questions (such as those involving GE requirements, graduation, etc.) should be directed to the college advisement center, but questions regarding curriculum and career decisions should be directed to the faculty.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

No D credit is acceptable for any course in a departmental major.

Humanities

Widely used in the Renaissance, the term *humanities* (*humanitas* or *studia humanitatis*) refers to the study of human intellectual and artistic creativity. Humanities is both a general academic category (inclusive of literature, history, philosophy, and the history and criticism of art and music) and a discipline in its own right with a methodology for the critical study of intellectual history and aesthetics. Pursued as a major, the field offers students unusual latitude in developing a broad and full program in the liberal arts, as well as developing skills in reasoning, language, writing, and library use—essential for later independent learning.

Majors in humanities find employment in a large variety of fields, including business, education, library science, tourism, and civil and foreign service. They are also excellent candidates for graduate work in other humanities-related disciplines and professional schools (law, business, and medicine).

BA Humanities

The requirements for the major are arranged in such a way as to constitute a sequence. Section I is generally taken during the freshman and sophomore years, section II during the junior year, section III during the junior and senior years, and section V during

the senior year. Section IV may be distributed over several years.

I. Historical foundation (21 hours): Hum 200, 201, 202, 261 262 (Honors sections recommended); 240 or 242; CICv 110 or 241 (Honors section recommended).

II. Traditional humanistic skills (9 hours, 3 in each category):

- A. Hum 350 (Prerequisite: Eng1311 or Phil311).
- B. Upper-level literature course in a foreign language beyond GE requirement.
- C. Phil 110, 213, or 214.

III. Emphasis area (12 hours): A core of 12 hours (more if music) in literature (English, comparative, or foreign language), history, philosophy, music, art history, or Classical Studies. (Philosophy or foreign literature courses taken under section II above may not also count toward emphases in philosophy and literature.) Courses toward the emphasis area are to be selected from the following list of approved courses. Exceptions must be cleared by the department. At least 6 of the 12 hours must be in upper-division courses.

Note: The humanities composite teaching major requirements for sections III and IV differ from other tracks. See Humanities in the Secondary Education section of this catalog.

IV. Supporting course work (8–9 hours): This block of course work can be used in a variety of ways, depending on the student's emphasis or career plans. Two requirements govern the selection of courses: (1) they must be a coherent block and (2) they must be approved in writing by the department student advisor. The following are possibilities:

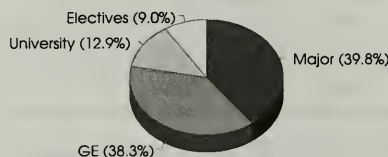
- A. Students in *general humanities* or students desiring to pursue a *graduate degree in a humanistic discipline* will use this block to strengthen the emphasis area either by further work in the emphasis area proper or by coherent course work (e.g., period concentration, area studies, etc.) in related humanities fields. The list of approved courses for the emphasis area may be used as a guide, but other courses (e.g., in humanities, classical civilization, or Honors humanities) may also be approved.
- B. For students wishing to certify in *secondary teaching* with a humanities composite teaching major, the supporting course work requirement will be filled by the professional education classes. See the Secondary Education section of this catalog for these requirements.
- C. Students wishing to combine a humanities major with preparation for *professional schools* (e.g., MBA programs) that may require quantitative skills beyond those

possible under section II.B above may use this block of supporting course work to acquire and strengthen those skills (e.g., CS 133, Acc 200, Econ 110, Math 119, or Stat 222). Other *preprofessional* blocks of course work (law, medicine, management communications, secretarial skills, etc.) may also be approved by the humanities section representative.

- D. Any university minor. None of these classes may be double counted for major classes.

V. Problems and issues courses (6 hours): Two of Hum 401R, 402R, 403, 404R, 405R.

Summary of Degree Requirements for BA Humanities



1. Total hours	128.0
2. Major hours ♦	47–55.0
3. General Education requirements	49.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	16.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	7.5–15.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in Humanities and University Honors

- I. Honors Program requirements:
 - A. The Honors General Education graduation requirements as listed in the Honors Education section of this catalog. Specific requirement: Hum 201H-202H.
 - B. General Education. Of Arts and Sciences courses remaining after Honors core, two must be in Honors sections.

II. Honors major requirements. Students must make the following adjustments in

non-Honors major requirements outlined in the BYU General Catalog:

- A. Honors sections of historical foundation courses (section I) are required rather than recommended. Hum 201H-202H also fills History of Civilization requirement of Honors core. (Students entering program late, after having taken non-Honors sections of any of these courses, may petition to have part of this Honors requirement waived—though not 201H-202H.)
- B. Sections II.A.2 and 3: Where Honors sections of upper-level foreign language literature courses or of philosophy courses are offered, these are recommended.
- C. Completion of the Honors mathematics requirement.
- D. Section III: Where Honors sections are offered in emphasis area, these are recommended.
- E. Honors thesis (Hum 499R, 3 hours minimum), oral defense of thesis, and examination on Honors “Masterworks of Art and Literature.”

BA Humanities Composite Teaching

See Humanities in the Secondary Education section of this catalog and section IV.B under BA Humanities section.

Humanities Minor

I. Language requirement: A foreign language through fourth semester or equivalent.

II. Course requirements: Hum 200, 201, 202; one of 240, 242, 261, 262; 350; one of 401R, 402R, 403, 404R, 405R.

Minor hours req.: 18

List of Approved Courses

Art

- 210 (3) Survey of Western Architecture
- 211, 212 (3 ea.) Survey of Art and Architecture
- 213 (3) Survey of Oriental Art and Architecture
- 301 (3) Art of Egypt and Mesopotamia
- 302 (3) Greek Art
- 303 (3) Roman Art
- 304 (3) Early Christian and Byzantine Art
- 306 (3) Italian Renaissance Art
- 307 (3) Northern Renaissance
- 309 (3) Nineteenth-Century European Art
- 310 (3) Modern Art
- 311 (3) Modern Architecture
- 312 (3) Contemporary Art
- 313 (3) Northern Baroque Art
- 314 (3) Southern Baroque Art
- 315 (3) American Architecture and City Planning
- 317 (3) American Painting and Sculpture to 1913
- 318 (3) Early Medieval and Islamic Art
- 319 (3) Romanesque-Gothic Art and Architecture

- 323 (3) Japanese Art
 400R (3 ea.) Individual Study in Art History
 415R (3 ea.) Special Topics
 495R (3 ea.) Seminar in Art History
- Classical Civilization
 245 (3) Golden Age of Greece
 246 (3) Golden Age of Rome
 304 (3) Greek History*
 307 (3) Roman History*
 355 (3) Greek and Roman Classics and the English Tradition
 361 (3) Survey of Greek Literature
 362 (3) Survey of Latin Literature
- *May be used in history emphasis area
- Classics
 420 (3) Ancient Literary Criticism
 430R (3 ea.) Topics in Greek and Roman History
 490R (3 ea.) Seminar in Classics
- Comparative Literature
 310 (3) Introduction to Literary Analysis and Comparative Literature
 420R (3 ea.) Studies in Periods and Movements
 430R (3 ea.) Studies in Literary Genres
 440R (3 ea.) Studies in Themes and Types
 450R (3 ea.) Studies in Literary Relations
 460R (3 ea.) Studies in Literary Theory
- English
 232 (3) Shakespeare
 236 (3) Masterpieces of English Literature
 251 (3) Fundamentals of Literary Interpretation and Criticism
 291 (3) Perspectives in English Literature 1
 292 (3) Perspectives in English Literature 2
 293 (3) Perspectives in American Literature
 300 (1-4) English Literature in a Cultural Setting
 325 (3) Traditional Grammar Usage
 333 (3) The Later English Novel
 336 (3) The American Novel
 337 (3) Contemporary Fiction
 338 (3) European Novel
 341 (3) English Drama
 343 (3) Modern English and American Drama
 350 (2) The Bible as Literature
 351 (3) Literary Theory and Criticism 1: The Critical Tradition
 352 (3) Literary Theory and Criticism 2: Contemporary Criticism
 355 (3) Greek and Roman Classics and the English Tradition
 359 (3) The Short Story
 361 (3) American Literature to the Mid-Nineteenth Century
 362 (3) Later Nineteenth-Century American Literature
 363 (3) American Literature Since 1914
 364 (3) The Literature of the American West
 366 (3) Modern Poetry
 368 (3) Literature of the Latter-day Saints
 371 (3) English Literature to 1500: The Medieval Period
 372 (3) English Literature from 1500 to 1660: The Renaissance Period
 373 (3) English Literature from 1660 to 1780: The Classical Period
 374 (3) English Literature from 1780 to 1832: The Romantic Period
 375 (3) English Literature from 1832 to 1890: The Victorian Period
 376 (3) English Literature from 1890 to 1950: The Modern Period
 381 (3) Chaucer
 382 (3) Shakespeare
 383 (3) Milton
 391 (3) Introduction to Folklore
 392 (3) American Folklore
 395R (3 ea.) Eminent Authors and Themes in Literature
 420 (3) Literature for Adolescents
- History
 300 (3) Ancient Near East
 302 (3) Medieval and Modern Near East
 303 (3) Jewish History: 70 A.D. to the Present
 304 (3) Greek History
 307 (3) Roman History
 308 (3) History of African Civilizations to 1800
 309 (3) Modern African History: 1800 to the Present
 310 (3) The Early Middle Ages
 311 (3) The Late Middle Ages
 312 (3) The Renaissance: Age of Transition
 313 (3) The Reformation: Age of Turmoil
 315 (3) Overseas Expansion of Europe
 318 (3) European Jews and the Holocaust
 319 (3) Ideas and Man in the Modern World
 320 (3) The Age of Enlightenment
 321 (3) War and Peace in the Modern World
 322 (3) Nineteenth-Century Europe
 323 (3) Europe in the Twentieth Century
 326 (3) The Family in Europe
 327 (3) Society in Europe
 340 (3) Premodern Asia
 341 (3) Modern Asia
 350 (3) History of Asian Religions and Thought
 351 (3) Conquest and Colonization of Latin America
 352 (3) Modern Latin America
 387 (3) Philosophies of History
 388 (3) Life and Thought in America
- Languages (for languages not listed see advisor)
 Chinese
 343 (3) Chinese Classical Literature in Translation: Poetry
 344 (3) Chinese Classical Literature in Translation: Prose
 345 (3) Chinese Culture
 441, 442 (3 ea.) Classical and Documentary Chinese
 443 (3) Modern Chinese Literature
 444 (3) Contemporary Literature
- French
 439 (3) Francophone Literature
 441 (3) French Literature—Middle Ages and Sixteenth Century
 442 (3) French Literature—Seventeenth and Eighteenth Centuries
 443 (3) French Literature of the Nineteenth Century
 444 (3) French Literature of the Twentieth Century
 445 (3) French Civilization from Beginning to 1589
 446 (3) French Civilization from 1589 to Present
- German
 330 (3) Cultural History of German-speaking Peoples
 340 (3) Introduction to Literary Analysis
 430 (3) Masterpieces of German Literature 1
 431 (3) Masterpieces of German Literature 2
 440R (3 ea.) German Literary Periods and Movements
 441R (3 ea.) Studies in German Literary Genres
 442R (3 ea.) Major German Authors
- Greek
 430 (3) Herodotus
 431 (3) Homer's *Odyssey*
 433 (3) Thucydides
 434 (3) Sophocles and Euripides
 435 (3) Greek Lyric Poetry
 436 (3) Plato
 437 (3) Attic Orator
 490R (3 ea.) Topics in Greek Literature
- Italian
 441 (3) Italian Literature of the Late Middle Ages and Renaissance
 442 (3) Italian Literature of the Baroque and Enlightenment Periods
 443 (3) Italian Literature of the Romantic Period
 444 (3) Italian Literature of the Twentieth Century
 445 (3) Italian Civilization from the Beginning to 1600
 446 (3) Italian Civilization from 1600 to Modern Era
 460 (3) Dante's *Divine Comedy*
- Japanese
 343 (3) Japanese Literature in English Translation—Poetry and Drama
 344 (3) Japanese Literature in English Translation—Prose
 345 (3) Japanese Culture
 353 (2) Modern Japanese Novel in Translation
 441 (3) Introduction to Classical Japanese
 443 (3) Advanced Readings and Grammar
 444 (3) Modern Japanese Literature
- Korean
 340 (4) Introduction to Traditional Korean Literature
 344R (3 ea.) Korean Literature in Translation
 345 (3) Korean Culture and Society
 441 (4) Korean Documents
 443 (4) Modern Korean Literature
- Latin

- 430 (3) Livy
- 431 (3) Vergil
- 432 (3) Ovid
- 433 (3) Cicero
- 434 (3) Plautus and Terence
- 435 (3) Catullus
- 436 (3) Tragedy and Epic of the Early Empire
- 437 (3) The Latin Epistle
- 438 (3) Horace
- 440 (3) Roman Satire
- 441 (3) Medieval and Renaissance Latin
- 490R (3 ea.) Topics in Latin Literature
- Portuguese
 - 345 (3) Portuguese Civilization
 - 355 (3) Brazilian Civilization
 - 441 (3) Survey of Portuguese Literature
 - 451 (3) Survey of Brazilian Literature
- Russian
 - 240 (3) Russian Literature in English Translation
 - 245 (3) Cultural Survey of Russia
 - 441 (3) Survey of Russian Literature in the Nineteenth Century
 - 442 (3) Survey of Russian Literature in the Twentieth Century
- Scandinavian
 - 344R (3 ea.) Topics in Scandinavian Studies
 - 401 (3) Cultural History of Scandinavia
 - 441 (4) Danish and Norwegian Literature
 - 445 (4) Swedish Literature
 - 447 (4) Finnish Literature
 - 490R (3 ea.) Seminar in Scandinavian Studies
- Spanish
 - 345 (3) Iberian Civilization
 - 355 (3) Ibero-American Culture
 - 365 (3) Mexican-American Culture
 - 441 (3) Survey of Spanish Literature
 - 451 (3) Survey of Hispanic-American Literature
 - 461 (3) Spanish-speaking American Literature
- Music
 - See advisor.
- Philosophy
 - 110 (3) Introduction to Philosophy
 - 213 (3) Philosophy of Morality
 - 214 (3) Philosophy of Art
 - 215 (3) Philosophy of Religion
 - 313 (3) Philosophy of Language
 - 314 (3) Philosophy of Science
 - 315 (3) Philosophy of the Social Sciences
 - 316 (3) Philosophy of Law
 - 317 (3) Philosophy of Education
 - 318 (3) Science and Religion
 - 319 (3) Philosophy and Literature
 - 371R (3 ea.) Figures in Philosophy
 - 372R (3 ea.) Topics in Philosophy
 - 421 (3) Metaphysics: Philosophy of Being
 - 422 (3) Epistemology: Philosophy of Knowledge

Humanities (Hum)

Undergraduate Courses

101. An Introduction to the Humanities. (3:3:0) Independent Study also.

Study of the arts emphasizing forms and relationships, the development of critical skills, and an awareness of traditional humanistic values.

200. Modes of Perception. (3:3:0)

Critical skills in art analysis. Reading and understanding literary and nonliterary texts. Should be taken during first semester of work in the major.

201. Arts in Western Culture 1. (3:3:0)

Honors also.

Western civilization from Greek antiquity to Renaissance from perspective of traditional humanistic values reflected in its arts and ideas. Examines fundamental questions about human experience, formative events in history, and value of important literary and artistic texts.

202. Arts in Western Culture 2. (3:3:0)

Honors also.

Western civilization from Renaissance to present from perspective of traditional humanistic values reflected in its arts and ideas. Examines fundamental questions about human experience, formative events in history, and value of important literary and artistic texts.

240. Introduction to the Humanities of Asia. (3:3:0)

Major arts of Asian cultures in their historical, religious, and philosophical settings.

242. Introduction to the Humanities of the Islamic World. (3:3:0)

Major arts of Islamic cultures in their historical, religious, and philosophical settings.

261. Introduction to American Humanities 1: Colonial Era Through 1876. (3:3:0) Honors also.

Value systems reflected in the arts and ideas of the United States from the colonial era to 1876.

262. Introduction to American Humanities 2: 1877 to the Present. (3:3:0) Honors also.

Value systems reflected in the arts and ideas of the United States from 1877 to the present.

270R. European Humanities and the Arts. (1–6:Arr.:Arr. ea.) Only offered on the six-month Study Abroad programs in London and Vienna.

290R. Special Studies in the Humanities. (3:0:0 ea.)

350. Interpretation of Literature and the Arts. (3:3:0) Prerequisite: all historical foundation courses (section I under major requirements) and either Engl 311 or Phil 311.

Understanding and writing about literature and at least one of the other arts; bibliographic techniques. Should be taken junior year.

401R. Topics in Humanities. (3:3:0 ea.)

Prerequisite: Hum 350.

Topics vary.

402R. Contemporary Issues in the Humanities. (3:3:0 ea.) Prerequisite: Hum 350.

Topics vary.

403. Interrelations of the Arts. (3:3:0)

Prerequisite: Hum 350.

Theory and methodology of the study of interrelations among the arts.

404R. Period Studies and the Problem of Periodization. (3:3:0 ea.) Prerequisite: Hum 350.

Topics vary.

405R. Theories of Cultural History. (3:3:0 ea.) Prerequisite: Hum 350.

Types and models of cultural history or of historical topics in the humanities (history of criticism, cultural historiography, etc.). Topics vary.

499R. Honors Thesis. (1–6:Arr.:Arr. ea.)

Advanced Undergraduate or Graduate Course

590R. Directed Readings. (1–3:Arr.:Arr. ea.) Prerequisite: consent of graduate coordinator.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

610. Research Methods in Humanities. (2:1:0)

620R. Period Studies in the Humanities. (3:3:0 ea.)

630. Writing the Thesis Prospectus. (1:1:0)

650R. Movements in the Humanities. (3:3:0 ea.)

690R. Seminar in the Humanities. (3:3:0 ea.)

699R. Master's Thesis. (1–9:Arr.:Arr. ea.)

Classics

The Classics Section administers an undergraduate program in Classical Studies. Classical Studies is the study of Greek and Roman cultures—their languages, literature, history, art, and philosophy. A major in Classical Studies provides essential tools to deal with philology, biblical and early Christian studies, ancient history, archaeology, and occidental literature, as well

as traditional grounding in the Classics. For those primarily interested in religious studies, instruction is offered in New Testament Greek. Pursued as a major, the field offers an extraordinary opportunity to study the intellectual, artistic, and historical origins of our culture and to develop reasoning, research, and writing skills.

Majors in Classical Studies find employment in a variety of fields, including business, education, library science, tourism, and civil and foreign service. They are also excellent candidates for graduate work in other humanities-related disciplines and professional schools (law, business, and medicine).

Greek and Roman History

Classics has the responsibility for staffing and administering offerings in Greek and Roman history. Courses in these fields are offered under Classical Civilization, Classics, Greek, and Latin. Some of these courses are cross-listed with history, and several may count toward a history major. See the History section of this catalog for details.

Classical Civilization

Classical Civilization courses presuppose no knowledge of the Greek or Latin languages and are open to all students. They are especially recommended for those who desire to understand the ancient traditions underlying modern culture.

BA Classical Studies

The BA in Classical Studies is a unified degree program in Latin and Greek language, as well as the literature, history, and culture of ancient Greece and Rome. Students may pursue the Classical Studies BA in one of four emphases: Greek, Latin, Classics (Latin and Greek), or Classical Civilization.

Greek

(Emphasis on Greek language and literature, with some work in Greek civilization)

I. ClCv 110 or 241; 304, 361; Clscs 350, 420; Greek 201, 301, 302, 321.

II. Four additional courses from Clscs 430R, 490R, Greek 311, 411R, 430, 431, 433, 434, 435, 436, 437, 490R.

Latin

(Emphasis on Latin language and literature, with some work in Roman civilization)

I. ClCv 110 or 241; 307, 362; Clscs 350, 420; Latin 201, 301, 302, 321.

II. Four additional courses from Clscs 430R, 490R, Latin 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 490R.

Classics

(Emphasis on Greek and Latin literature and language, with some work in Classical Civilization)

I. ClCv 110 or 241; 304, 307; 361 or 362; Clscs 350, 420; Greek 201, 301, 302; Latin 201, 301, 302.

II. Greek or Latin 321, and four additional courses (two Greek, two Latin) from Clscs 430R, 490R, or any 400-level course in Greek or Latin.

Classical Civilization

(Emphasis on Classical Civilization, with work in either Greek or Latin)

I. ClCv 110, 241, 304, 307, 361, 362; Clscs 420.

II. One of Greek 201, 301, 302 or 311; or one of Latin 201, 301, 302.

III. A 400-level Latin or Greek course.

IV. Two additional courses from ClCv 121, 122, 245, 246, 310, 355, Clscs 430R, 490R.

Summary of Degree Requirements for BA Classical Studies

	Electives (21.5%)	Major (28.1%)	University (12.9%)	GE (37.5%)
1. Total hours				128.0
2. Major hours*		28.0–44.0		
3. General Education requirements				48.0
Core				15.0
First-Year Writing				3.0
Arts and Sciences electives				12.0
Advanced Math/Foreign Language				15.0
Advanced Writing				3.0
4. University requirements			16.5	
Religion			14.0	
PE/Health			2.5	
5. Elective hours			19.5–35.5	
6. 40 hours upper-division				
GPA requirement of 2.0				
7. Estimated semesters to graduate				
13 hours per semester				10.0
16 hours per semester				8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.				

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Classical Studies Minor

Students may pursue the Classical Studies minor in one of four emphases: Greek, Latin, Classics (Latin and Greek), or Classical Civilization.

Greek

16 hours of course work in Greek beyond Greek 102, and 6 hours of course work in Greek, Classical Civilization, or Classics.

Latin

16 hours of course work in Latin beyond Latin 102 and 111, and 6 hours of course work in Latin, Classical Civilization, or Classics.

Classics

19 hours of course work in Latin or Greek beyond the 100 level, and 6 hours of course work in Latin, Greek, or Classical Civilization.

Classical Civilization

15 hours of course work in Classical Civilization and 6 additional hours in Classical Civilization or in Latin and Greek beyond the 100 level.

BA Latin Teaching

See Latin in the Secondary Education section of this catalog.

Latin Teaching Minor

See Latin in the Secondary Education section of this catalog.

Classical Civilization (ClCv)

Undergraduate Courses

110. Introduction to Greek and Roman Literature. (3:3:0) Honors also.

Homer's *Iliad*, Sophocles' *Oedipus the King*, Vergil's *Aeneid*, and other important works of the Greeks and Romans. All readings in English.

121. Warfare in Ancient Greece and Rome. (3:3:0)

Military history of ancient Greece and Rome with emphasis on organization, tactics, strategy, major commanders, and important battles.

122. Greek and Roman Religion. (3:3:0)

Worship and cults in ancient Greece and Rome from the archaic period through the demise of Greco-Roman religion with the triumph of Christianity.

241. Greek and Roman Mythology. (3:3:0)

Greek and Roman gods, heroes, and myths, emphasizing literature but also giving attention to representations in the visual arts.

245. Golden Age of Greece. (3:3:0)

Civilization, culture, and daily life of Greece as indicated through its literature, art, history, and archaeology. All readings in English.

246. Golden Age of Rome. (3:3:0)

Civilization, culture, and daily life of Rome as indicated through its literature, art, history, and archaeology. All readings in English.

304. (ClCv-Hist) Greek History. (3:3:0)

Political, economic, social, and intellectual history of Greece from Mycenaean times to the Hellenistic period.

307. (ClCv-Hist) Roman History. (3:3:0)

Political, economic, social, and intellectual history of Rome from the foundation of the city to Constantine.

310. Classical Archaeology. (3:3:0)

Major excavations and antiquities of the Mediterranean region illustrating Greco-Roman history.

340R. Topics in Classical Literature and Civilization. (3:3:0 ea.)

Classical literary genres; rhetorical, philosophical, and historical writings; relationships of art and literature; or the classical tradition in the Middle Ages and Renaissance. Topics vary.

355. (CLCv-Engl) Greek and Roman Classics and the English Tradition. (3:3:0)

Major works by such authors as Homer, the Greek and Roman tragedians, Thucydides, Vergil, and Petronius in English translation, emphasizing their influence on English and American literature.

361. Survey of Greek Literature. (3:3:0)

Development and interrelation of literary genres of ancient Greece, e.g. epic and lyric poetry, tragedy, history, philosophy, etc. Texts read in English.

362. Survey of Latin Literature. (3:3:0)

Development and interrelation of the literary genres of ancient Rome, e.g. comedy, poetry, history, oratory, etc. Texts read in English.

Classical Greek (Greek)

Undergraduate Courses

101. First-Year Greek (First Semester). (4:4:0)

102. First-Year Greek (Second Semester). (4:4:0)

201. Intermediate Greek. (4:4:0) Prerequisite: Greek 102 or 111.

Readings from Xenophon with review and continuation of grammar.

301. Classical Greek Poetry: Homer's *Iliad*. (3:3:0) Prerequisite: Greek 201.

302. Classical Greek Prose. (3:3:3) Prerequisite: Greek 201.

311. New Testament in Greek: Gospels. (3:3:0) Prerequisite: Greek 201.

321. Third-Year Grammar and Composition. (3:3:0) Prerequisite: Greek 302.

Exercises in composing Greek prose.

411R. Topics in New Testament Greek. (3:3:0 ea.) Prerequisite: Greek 311.

Readings from the Gospels, the Pauline or general epistles, or the Apocalypse.

430. Herodotus. (3:3:0) Prerequisite: Greek 302 or equivalent.

431. Homer's *Odyssey*. (3:3:0) Prerequisite: Greek 301.

433. Thucydides. (3:3:0) Prerequisite: Greek 302.

434. Sophocles and Euripides. (3:3:0) Prerequisite: Greek 301.

435. Greek Lyric Poetry. (3:3:0) Prerequisite: Greek 301.

436. Plato. (3:3:0) Prerequisite: Greek 302.

Reading and analysis of Greek text of selected dialogues by Plato (e.g., *The Republic*, *Meno*, *Protagoras*).

437. Attic Orators. (3:3:0) Prerequisite: Greek 302.

490R. Topics in Greek Literature. (1-3:3:0 ea.)

Topics vary.

Modern Greek (GrkM)

Undergraduate Courses

101, 102. First-Year Modern Greek. (4:4:0 ea.)
Basic language skills.

201. Second-Year Modern Greek. (4:4:0)
Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

***211. Second-Year Conversation. (2:2:0)**
Prerequisite: GrkM 201 or equivalent experience.
Intermediate listening comprehension and speaking skills.

***311. Third-Year Conversation. (2:2:0)**
Prerequisite: GrkM 211 or equivalent experience.
Advanced conversational skills.

*Credit by examination only. See policy in College of Humanities' Language Credit by Examination section of this catalog.

Classical Latin (Latin)

Undergraduate Courses

101. First-Year Latin (First Semester). (4:4:0)

102. First-Year Latin (Second Semester). (4:4:0)

111. Beginning Latin Accelerated. (5:5:0)
Honors also.

Equivalent of combined Latin 101 and 102. Prepares students for Latin 201.

121. Latin for Genealogists. (3:3:0)
Independent Study also.

122. Prelegal Latin. (2:2:0)
Recommended for prelaw and current law students (usually taught in the evening).

123. Premedical Latin and Greek. (2:2:0)
For premedical and pre dental students and students in the physical and natural sciences (usually taught in the evening).

201. Intermediate Latin. (4:4:0) Prerequisite: Latin 102, 111, or three units of Latin in high school.

Readings from Caesar, etc., with a review and continuation of grammar.

301. Classical Latin Poetry. (3:3:0)
Prerequisite: Latin 201.

Selections from Vergil's *Aeneid* and Ovid's *Metamorphoses*.

302. Classical Latin Prose. (3:3:0)
Prerequisite: Latin 201.

Readings in Cicero's Catilinarian orations and Sallust's *Catiline*.

321. Third-Year Grammar and Composition. (3:3:0) Prerequisite: Latin 302 or concurrent registration.

377. Secondary Teaching Procedures. (3:3:1)
Prerequisite: ScEd 276R; Latin 321 or equivalent.

Skills mastery, hearing, speaking, reading, writing, and identification of teacher-pupil activities required for conceptual learning. Lectures, demonstrations, and application of linguistic techniques to practical classroom requirements.

430. Livy. (3:3:0) Prerequisite: Latin 302.
Selections from Livy's *Ab Urbe Condita*.

431. Vergil. (3:3:0) Prerequisite: Latin 301.

432. Ovid. (3:3:0) Prerequisite: Latin 301.

433. Cicero. (3:3:0) Prerequisite: Latin 302.
Selections from the works of Cicero.

434. Plautus and Terence. (3:3:0) Prerequisite: Latin 301.

435. Catullus. (3:3:0) Prerequisite: Latin 301.

436. Tragedy and Epic of the Early Empire. (3:3:0) Prerequisite: Latin 301.
Selections from Seneca, Lucan, and the Flavian epic poets.

437. The Latin Epistle. (3:3:0) Prerequisite: Latin 302.
Letters of Cicero, Seneca, Pliny, and the later tradition.

438. Horace. (3:3:0) Prerequisite: Latin 301.

439. Tacitus. (3:3:0) Prerequisite: Latin 302.

440. Roman Satire. (3:3:0) Prerequisite: Latin 301.
Selections from Horace, Petronius, and Juvenal.

441. Medieval and Renaissance Latin. (3:3:0)
Prerequisite: Latin 301, 302.

Study of particular periods (e.g., Carolingian renaissance, twelfth-century renaissance) or genres (e.g., historiography, epic, autobiography), or survey of medieval Latin. Topics vary.

479. Secondary Student Teaching. (1-8:1:40)
Prerequisite: ScEd 276R; Latin 321, 377.

490R. Topics in Latin Literature. (1-3:3:0 ea.)
Topics vary.

Classics (Clscs)

Undergraduate Courses

350. Research Methods in Classics. (1:1:0)

Basic research methods and bibliography for the various disciplinary fields in the Classics section.

420. Ancient Literary Criticism. (3:3:0)

Prerequisite: Greek 302 or Latin 302.

Survey emphasizing both chief works of the tradition and their practical application to reading of Greek and Latin authors.

430R. (Clscs-Hist) Topics in Greek and Roman History. (3:3:0 ea.) Prerequisite: Greek 201 (Greek topics) or Latin 201 (Roman topics).

Topics vary (e.g., Rise of the Greek City-State, Greek Political Thought, Classical Historiography, Rome and the Etruscans, Imperial Rome).

490R. Seminar in Classics. (3:3:0 ea.)

Combined topics in Greek and Latin (e.g., comparative epic poetry, classical tradition of criticism, Euripides and Seneca). Topics vary.

Comparative Literature

Comparative literature is the study of literature in its totality. The comparative literature major acquaints students with literary study beyond the confines of any particular national tradition and with the relationship between literature and other areas of knowledge. Combining the synthesizing skills and knowledge related to individual national literatures, the comparative literature major utilizes a wide range of linguistic and philosophical knowledge unique to an undergraduate program. Pursued as a major, the field offers students unusual latitude in developing a broad and full program in the liberal arts, as well as developing competence in reasoning, language, writing, and research—essential for later independent learning.

Comparative literature majors are well prepared for graduate programs in languages and literature and for employment in the foreign service, library science, business, education, and tourism. In addition, comparative literature is an outstanding preprofessional major for those interested in law, public administration, business management, and medicine.

BA Comparative Literature

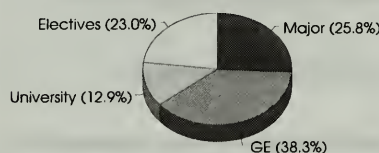
I. Thorough knowledge of two language traditions relevant to individual program of study (one of these may be English for students who emphasize the Anglo-American literary tradition). Competence will normally be demonstrated in course work, but an examination may be required. If planning advanced work in comparative literature, students should gain reading

knowledge of both an additional modern language and a classical language.

II. CLit 310; two sections of 420R (in different periods); four courses from 430R, 440R, 450R, 460R; ClCv 110 or 355 or literature course in Greek or Latin; and 12 hours of literature courses dealing with texts in original language (see comparative literature advisor for list of approved courses). *CLit 310 and reading knowledge of at least one foreign language are prerequisite to all upper-division comparative literature courses.*

III. During the final semester an exit examination on the BA reading list in comparative literature will be administered. This requirement must be met before graduation clearance can be given.

Summary of Degree Requirements for BA Comparative Literature



1. Total hours	128.0
2. Major hours ♦	33.0
3. General Education requirements	49.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	16.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	29.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in Comparative Literature and University Honors

- I. Honors Program requirements:
 - A. Honors General Education graduation requirements as listed in the Honors Education section of this catalog. Recommended: CLit 201H–202H.
 - B. General Education: Of Arts and Sciences courses remaining after Honors core, two must be in Honors sections.

II. Honors major requirements:

- A. Language requirement: Thorough knowledge of two languages relevant to selected program (one of these may be English for students who elect to emphasize English or American literature). Competence will normally be demonstrated through course work (400-level foreign language literature), but an examination may be required. If planning advanced work in comparative literature, students should gain reading knowledge of both additional modern and classical languages.
- B. Course requirements: CLit 310H; two sections of 420R (in different periods); three courses from 430R, 440R, 450R, 460R, or 490R (all are Honors courses); a literature course in classical civilization (110H or 355), Greek, or Latin; and 12 additional hours in literature courses dealing with texts in the original language (see list of approved courses in Class Schedule for the semester of entrance to program; Honors sections recommended).
- C. Thesis and examination requirements: Honors thesis (CLit 499R, 3 hours minimum), oral defense of thesis, and examination on comparative literature reading list and Honors "Masterworks of Art and Literature."

III. All comparative literature majors are encouraged to register for Honors sections of required courses. Candidates for a degree with University Honors *must* complete Honors sections of required courses whenever such sections are offered.

Approved courses: Contact department or Honors Program Office.

Comparative Literature (CLit)

Undergraduate Courses

201. History of Civilization: Literature 1. (3:3:0) Honors also.

Major world civilizations from antiquity to early Italian Renaissance, emphasizing socioeconomic, political, intellectual, and aesthetic developments, with primary focus on literary texts.

202. History of Civilization: Literature 2. (3:3:0) Honors also. Prerequisite: CLit 201.

Major world civilizations from Europe's High Renaissance to modern times, emphasizing socioeconomic, political, intellectual, and aesthetic developments, with primary focus on literary texts.

310. Introduction to Literary Analysis and Comparative Literature. (3:3:0) Prerequisite: reading knowledge of at least one foreign language.

Methods of literary analysis, emphasizing basic issues of comparative literature and prosody and other problems related to foreign language texts.

420R. Studies in Periods and Movements. (3:3:0 ea.) Prerequisite: CLit 310 or Hum 350 or concurrent registration.

Topics vary.

430R. Studies in Literary Genres. (3:3:0 ea.) Prerequisite: CLit 310 or concurrent registration.

Various genres (e.g., novel, epic, tragedy) and problems of genre. Topics vary.

440R. Studies in Themes and Types. (3:3:0 ea.) Prerequisite: CLit 310 or concurrent registration.

Major literary themes (e.g., Faust, Don Juan, Ulysses, Arthur), types, motifs, and problems of literary typology. Topics vary.

450R. Studies in Literary Relations. (3:3:0 ea.) Prerequisite: CLit 310 or concurrent registration.

Interrelations of national literatures and figures and of literature with other areas of knowledge (art, history, law, psychology, music, etc.). Topics vary.

460R. Studies in Literary Theory. (3:3:0 ea.) Prerequisite: CLit 310 or concurrent registration.

Topics vary.

490R. Directed Readings. (1-3:0:0 ea.)

499R. Honors Thesis. (1-6:Arr.:Arr. ea.)

Advanced Undergraduate or Graduate Course

590R. Directed Readings. (1-3:Arr.:0 ea.) Prerequisite: consent of graduate coordinator.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

610. Methods of Study in Comparative Literature. (3:3:0)

620R. Studies in Periods and Movements. (3:3:0 ea.)

630R. Studies in Literary Genres. (3:3:0 ea.)

640R. Studies in Themes and Types. (3:3:0 ea.)

650R. Studies in Literary Relations. (3:3:0 ea.)

660R. Studies in Literary Theory. (3:3:0 ea.)

670R. Tutorial Internship. (3:Arr.:0 ea.)

690R. Seminar in Comparative Literature. (3:0:0 ea.)

699R. Master's Thesis. (1-9:Arr.:Arr. ea.)

Hungarian

See Germanic and Slavic Languages.

Icelandic

See Germanic and Slavic Languages.

Information Management

See Management Communication.

Instructional Science

See Education.

International and Area Studies

See Kennedy Center for International Studies, David M.

International Relations

See Kennedy Center for International Studies, David M.

Italian

See French and Italian.

Japanese

See Asian and Near Eastern Languages.

Jerusalem Center for Near Eastern Studies

Director: S. Kent Brown, Professor of Ancient Scripture

Associate Director: J. Duane Dudley, Professor of Physics

Assistant Director—Administration:

C. Joseph Rowberry, CPA

Academic Coordinator: Michael W. Bawden

Librarian: Gayle Dudley

Resident Faculty

S. Kent Brown, Professor of Ancient Scripture (BYU)

J. Duane Dudley, Professor of Physics (BYU)
Nazzal, Laila, Assistant Professor of Sociology (Jerusalem Center)

Nazzal, Nafez Y., Professor of Near Eastern Studies (Jerusalem Center)

Rosen, David, Adjunct Professor of Near Eastern Studies (Jerusalem Center)

In addition, faculty members on professional development leave from the following academic areas at Brigham Young University are selected for one-year teaching appointments at the Jerusalem Center: Religious Education, Near Eastern Studies, History, Political Science, and foreign languages. Faculty members are expected to pursue an approved program of research, writing, and travel in addition to teaching courses.

Special Programs Faculty

Faculty members on professional development leave from Brigham Young University are also selected for teaching appointments in special programs at the Jerusalem Center: Arabic, Anthropology, Hebrew, Nursing, and Teaching English as a Second Language.

Scholars-in-Residence

Selected faculty from Brigham Young University are associated with the Jerusalem Center during a one-semester to one-year stay in Jerusalem through a scholar-in-residence program. Scholars-in-residence can be appointed from a wide range of academic areas at the university.

Visiting and Part-Time Faculty

Visiting and part-time faculty at the Jerusalem Center are selected from the Church Educational System, Ricks College, and institutions of higher education in Israel.

Goals

The Brigham Young University Jerusalem Center for Near Eastern Studies is an educational and cultural center created for study in the Near East, emphasizing religion, the humanities, and the social sciences. The Jerusalem Center has four principal goals:

1. Provide students an opportunity to study the scriptures in the setting in which the patriarchs, prophets, and the Lord himself lived and taught, and by that study to gain understanding of and commitment to the truths of the gospel of Jesus Christ.
2. Expand students' understanding of the religions, cultures, history, archaeology, geography, languages, and politics of the ancient and modern Near East.
3. Foster research and creative endeavors by BYU faculty, students, and visiting scholars.
4. Promote understanding with other peoples, cultures, and religious faiths that trace their roots to the Holy Land.

To achieve these goals, the Jerusalem Center offers a core curriculum with courses in the Old and New Testament and in the ancient and modern Near East. In addition, the center provides specialized courses in archaeology, geography, history, and culture of the Near East, including language study in Hebrew and Arabic for both undergraduate and graduate students.

The Jerusalem Center has marvelous physical facilities on Mount Scopus overlooking the oldest part of the city of Jerusalem. Classrooms, a library, a learning center, auditoriums, student and faculty apartments, a gymnasium and conditioning room, and a cafeteria provide a complete learning environment.

Academic Program

I. Calendar and program emphasis: Three programs are offered during the calendar year, scheduled to approximate the Provo campus calendar: fall semester (four-month program), winter semester/spring term (five-month program), and summer term (two-month program).

- A. The fall and winter semester programs are designed for students who have been or who are currently enrolled at a college or university. Most of the courses offered are at the upper-division level. Students are encouraged to prepare themselves in advance for this exceptional experience by taking such courses as PLSc 170, Geog 120, Hist 300, 302, Arab 101, Heb 101.
- B. The fall program includes field trips within the Holy Land and to the Sinai. An optional field trip to Egypt follows the regular semester. The winter/spring program includes field trips to Egypt and Jordan in addition to those within the Holy Land and to the Sinai.
- C. The summer term program is open to recent high school graduates and students with little college experience. Both lower- and upper-division survey courses with extensive field study are available. An optional field

trip to Egypt follows the regular term program.

II. Predeparture orientation course. Taken the semester before a student's work at the Jerusalem Center (also offered through Independent Study).

III. Curriculum: The following subject areas are included in all programs:

- A. Biblical Studies: Old Testament and New Testament
- B. Ancient Near Eastern Studies
- C. Modern Near Eastern Studies
- D. Introductory course in either Hebrew or Arabic (required during fall and winter semesters; not offered during summer term).
- E. Elective courses as arranged each semester (no elective courses offered during summer term).

Note: Some courses taken at the Jerusalem Center for Near Eastern Studies may be applied toward degrees in Near Eastern Studies, International Relations, and other majors in the College of Family, Home, and Social Sciences.

IV. Special programs offered periodically at the Jerusalem Center for Near Eastern Studies: intensive modern Arabic, intensive modern Hebrew, nursing internships, TESL internships.

University credit is available in each of these programs. For further information, students should contact the BYU Jerusalem Center Office, 309 HCEB, 378-6017.

Jerusalem Center

Undergraduate Courses

Orientation Course

IAS 201R. Cultural Survey—Middle East. (1:2:2 ea.) Independent Study also.

Jerusalem Center undergraduate studies orientation seminar. *Required of all participants before departure.*

Religion Courses

RelA 101. Old Testament Survey. (2:1.5:3) Survey of Old Testament integrated with extensive field study in biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies summer term program.

RelA 111. New Testament Survey of the Gospels. (2:1.5:3) Survey of New Testament Gospels integrated with extensive field experiences in biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies summer term program.

RelA 300. Old Testament Studies. (2:1.5:3)

Study of Old Testament integrated with extensive field experiences in biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies semester and summer term programs.

RelA 303. Old Testament Studies. (3:3:4)

Study of Old Testament integrated with extensive field experiences in biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies semester program.

RelA 310. New Testament Studies of the Gospels. (2:1.5:3)

Study of New Testament Gospels integrated with extensive field experiences in biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies summer term program.

RelA 311. New Testament Studies of the Gospels. (3:2:4)

Study of New Testament Gospels integrated with extensive field experiences in biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies semester program.

Near Eastern Studies Courses

NES 101R. Topics in Near Eastern Studies. (1–3:Arr.:Arr. ea.)

Studies based on individual and program needs. Elective credit for major and minor. Offered at Jerusalem Center for Near Eastern Studies.

NES 136. Introduction to Near Eastern Studies. (2:2:1)

Survey core course in social science/humanities. Elective credit for major and minor. Offered as part of Jerusalem Center for Near Eastern Studies summer term program. Does not receive GE credit.

NES 326. Introduction to Near Eastern Studies. (2:2:1) Prerequisite: at least junior standing.

Social science/humanities core course. Elective credit for major and minor. Offered as part of Jerusalem Center for Near Eastern Studies summer term program. Does not receive GE credit.

NES 336. Ancient Near Eastern Studies. (3:2:4)

Social science/humanities core course emphasizing ancient history extending to Byzantine period. Elective credit for major and minor. Offered at Jerusalem Center for Near Eastern Studies. Does not receive GE credit.

NES 347. (NES-Hist) Arab and Islamic Civilization. (2:2:1)

Social science/humanities core course covering Arab and Islamic civilization; historical evolution of Middle East to present. Provides overview of modern Palestinian society. Elective credit for major and minor in NES. Offered at Jerusalem Center for Near Eastern Studies. Does not receive GE credit.

NES 349. (NES-Hist) Jewish Civilization. (2:2:1)

Social science/humanities core course; broad introduction to Jewish self-understanding and history, focusing on relationships among people, faith, and land. Elective credit for major and minor. Offered at Jerusalem Center for Near Eastern Studies. Does not receive GE credit.

NES 398R. Advanced Topics in Near Eastern Studies. (1-3:Arr.:Arr. ea.)

Studies based on individual and program needs. Elective credit for major and minor. Offered at Jerusalem Center for Near Eastern Studies.

Language Courses

Arab 100. Introduction to Arabic. (1:1.5:0)

Beginning Arabic. Offered at Jerusalem Center for Near Eastern Studies.

Heb 100. Introduction to Hebrew. (1:1.5:0)

Beginning Hebrew. Offered at Jerusalem Center for Near Eastern Studies.

David M. Kennedy Center for International Studies

R. Lanier Britsch, Professor of History,
Director (237 HRCB)

Jeffrey F. Ringer, Assistant Director
Valerie Hudson, Professor of Political
Science, Director of Graduate Studies and
Research

Thomas E. (Ted) Lyon, Professor of Spanish,
Director of Undergraduate Studies

Rodney B. Boynton, Director of Study Abroad

Undergraduate Programs and Advisory Committee Coordinators

American Studies, Richard H. Cracroft
Asian Studies, Mark Peterson
Canadian Studies, Earl H. Fry
European Studies, Hans Kelling
International Relations, David Galbraith
Latin American Studies, Russell Cluff
Near Eastern Studies, Arnold H. Green

Each of the above programs is designed to create greater sensitivity and understanding of the world in which we live. These programs meet the needs of students interested in liberal education as well as those interested in international careers. Within the candidate's field of emphasis, courses may be taken to prepare for an international career with business,

government, humanitarian agencies, military or civilian intelligence, education, or a variety of other careers that may require international travel, residence, or expertise.

All students majoring in David M. Kennedy Center programs are encouraged to seek a meaningful experience with a foreign culture as part of their academic program. Credit earned while participating in a university-sponsored Study Abroad program, the Washington Seminar, international internships, or other supervised foreign experience may be applied toward major requirements.

For further information see the director of graduate or undergraduate studies. Individual considerations or problems will be referred to the program's advisory committee.

Graduate Program and Degree

MA International and Area Studies

Areas of Emphasis

The David M. Kennedy Center offers an interdisciplinary master of arts degree in International and Area Studies. Students select one of five different areas of emphasis:

American Studies
Asian Studies
International Development Studies
International Relations
Near Eastern Studies (Ancient)

Teaching Minors in Area Studies

The teaching minors offered by the David M. Kennedy Center are designed especially for secondary education majors. The program requires 23-24 credit hours in Asian Studies, Latin American Studies, or Near Eastern Studies and an academic major including required education courses; see Multicultural Education in the Secondary Education section of this catalog for requirements.

Double Major and Minor Credits

Credit applied toward one major program may not also be counted toward a second major or minor, with the exception of language competency credit or certain approved double major tracks. Neither may the student count credit for a minor as part of the major requirement. See advisor.

Religious Education

It is recommended that International and Area Studies majors take the following courses as part of the university religion requirement:

344 The International Church
350 The LDS Church in a World Setting
351 The Gospel and the World's Religions
354 Judaism, Islam, and the Gospel

International and Area Studies (IAS)

Undergraduate Courses

199R. International Internship.

(1-3:Arr.:Arr. ea.)

Nonsupervised undergraduate foreign internship.

201R. Cultural Survey. (1-4:2:2 ea.)

Prerequisite: performing group, International Intern, or Study Abroad participant status.

Multidisciplinary survey of various countries and regions in preparation for extended experience abroad.

390R. International Outreach Preparation and Presentation. (1-3:Arr.:0 ea.)

Prerequisite: instructor's consent.

Through lectures and demonstrations, with rigorous readings and area coordinator assistance, students develop abilities to prepare and share international understanding in schools and community interactions.

395R. International Careers and Service.

(1-3:Arr.:0 ea.) Prerequisite: major or minor leading to international professional or voluntary service; some international or area experience recommended.

Explorations of world careers and service, international networking; extensive readings; lectures; workshops with specialists.

397R. Topics in International and Area Studies. (1-3:Arr.:Arr. ea.)

Prerequisite: instructor's consent.

Study relating to current world problems.

399R. International Internship.

(1-9:Arr.:Arr. ea.) Prerequisite: acceptance into program.

Individualized work or volunteer experience in an international setting. Class must be coordinated through Study Abroad.

+International Relations 499R. Seminar in International and Area Studies. (1:1:0 ea.)

Advanced Undergraduate or Graduate Courses

501R. Graduate Colloquium. (1:1:0 ea.)

Methodologies and reading. Preparation for writing competency requirements and research paper presentation. Required of all International and Area Studies master's candidates.

595R. Special Studies (1-3:3:0 ea.)

Studies based on individual and program needs.

599R. International Internship.

(1-9:Arr.:Arr. ea.)

Professional-level internship in an international setting. Class must be coordinated through Study Abroad.

Graduate Degree Courses

See the 1993–94 BYU Graduate Studies Catalog.

695R. Directed Individual Study. (1–3:3:0 ea.)

697R. Seminar in International Studies. (1–3:Arr.:0 ea.)

699R. Master's Thesis. (1–6:Arr.:Arr. ea.)

African Studies

See director of undergraduate studies. No major offered.

American Studies

Program Advisory Committee

For information see coordinator.

Programs and Degrees

BA American Studies

The American Studies major examines the sweep of American experience, society, culture, and civilization from a variety of viewpoints—literature, history, gender, humanities, regions, politics, ethnic groups, geography, art, economics, religion, and folklore—based in core courses designed to examine American experience from a variety of standpoints. Majors are encouraged to develop particular skills in writing, literary criticism, historical research, and social, political, and economic analysis. The program provides not only rich interdisciplinary experience but also exposure to a variety of excellent scholars and teachers.

On graduation, American Studies students are usually qualified to enter graduate and professional schools (for law, MBA, MPA, PhD), government or community service, teaching, or advanced graduate studies in the liberal arts, including American Studies, American Civilization, American Culture, American History, and American Literature.

Program Requirements

BA American Studies

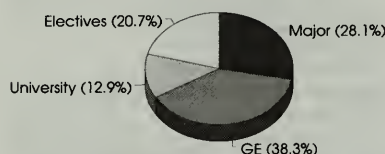
I. Prerequisite (12 hours): PISc 110, Econ 110, Hum 261, 262.

II. Required (33 hours): AmSt 303 and ten courses from AmSt 360, 390R (twice only), Art 315, 317, Econ 274, Engl 336, 358, 392, 395R or 495R (American topics; one only), Geog 450, Hist 250, 371, 380, 382, Hum 401R or 404R (American topic; one only), PISc 307, 319R.

III. Information:

- A. Course substitutions may be made only with written, prior permission of the American Studies chair.
- B. Students may substitute 3 credit hours of Washington, D.C., seminar credit for one American Studies elective.
- C. Majors should begin course work in the major by taking AmSt 303 fall semester of the sophomore or (at latest) junior year.
- D. Students will complete the Advanced Writing requirement by taking Engl 311, 312, 315, or 316 according to individual academic direction—humanities, social science, or science/law.
- E. No D credit will be accepted for major courses.

Summary of Degree Requirements for BA American Studies



1. Total hours 128.0
2. Major hours ♦ 36.0
3. General Education requirements 49.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 0–16.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 26.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

List of Courses

American Studies

- 303 Studies in the American Experience
- 360 Film in American Culture
- 390R Topics in American Studies

Art

- 315 American Architecture and Planning
- 317 American Painting and Sculpture to 1913

Economics

- 110 Economic Principles and Problems
- 274 American Economic History

English

- 336 The American Novel
- 358 Immigrant, Ethnic and Regional Literature
- 392 American Folklore
- 395R Eminent Authors and Themes in Literature
- 495R The Senior Course

Geography

- 450 United States and Canada

History

- 250 Popular Culture in America
- 371 The Machine in America
- 380 San Francisco
- 382 American Social History

Humanities

- 261 Introduction to American Humanities 1
- 262 Introduction to American Humanities 2
- 401R Topics in Humanities
- 404R Period Studies and the Problem of Periodization

Political Science

- 110 American Government and Politics
- 307 American Political Thought
- 319R Politics Through Literature

American Studies Courses (AmSt)

303. Studies in the American Experience. (3:3:0)

Social and intellectual life in American culture from the colonial period to the present.

360. Film in American Culture. (3:3:0)

Selected readings, lectures, and analysis of specific motion pictures as social documents, reflecting in different ways facets of the American experience.

390R. Topics in American Studies. (3:3:0 ea.)

Multidisciplinary study of a carefully defined problem in American culture. Topics vary.

Asian Studies

Program Advisment

For general advisement see the Humanities Advisment Center. For specific questions see the Asian Studies coordinator, 209 HRCB.

Programs and Degrees

BA Asian Studies

The Asian Studies major is an interdisciplinary program designed to prepare students for careers and advanced study in the specialized field of Asia not

provided by a major in one department. In the program, students acquire working competence in Chinese, Japanese, Korean, or another approved Asian language; a broad knowledge of Asian civilization; and a more specialized knowledge in an academic discipline.

The major as outlined is useful to those contemplating careers in academic areas, private industry, or government service. The import-export field and international services are particularly interested in persons who have a strong background in Asian Studies. Students may enter the program only with the approval of the coordinator of Asian Studies.

Asian Studies majors are generally encouraged to take a concurrent (double) major, particularly if the bachelor's degree will be a terminal degree. The concurrent major can be in any other area but would be most beneficial for those with a terminal bachelor's degree if in an area leading directly to employment.

Language Double Major. Within Asian Studies there are tracks complementing majors in Chinese, Japanese, and Korean. Potential language or Asian Studies majors should consider this double major option. See the coordinator for more information. The double major will not be strongly encouraged for those students who will go on to graduate schools.

Program Requirements

BA Asian Studies

I. Concurrent registration in a second major is strongly recommended.

II. Core courses (17–18 hours):

- A. Required: **Hist 341, Anthr 312, **Asian 395.
- B. One course from Hist 340, 343, 345.
- C. Two courses from Geog 470, Hist 350, Hum 240, PlSc 385, RelC 351.

**To be taken early in program.

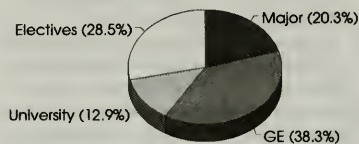
III. Electives: Three courses (8–9 hours) from the list below (this may include others of the above courses).

IV. Asian language requirement:

- A. Nonlanguage majors: Chinese, Japanese, or Korean (other Asian languages may be approved): 20 hours.
- B. East Asian language double majors: 12 hours of second Asian language, or area track option (see chair for options).

V. No D credit will be accepted for major courses.

Summary of Degree Requirements for BA Asian Studies



1. Total hours	128.0
2. Major hours ♦	26.0
3. General Education requirements	49.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0–16.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	36.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor

I. Core courses:

- A. Hist 341
- B. Core elective: One course from the above list of core electives.

II. Electives and Asian language requirements

- A. Asian language majors: Four electives from approved list, two of which must be from an area other than their major, and two semesters (8 hours) of a second Asian language.
- B. Non-Asian language majors: Three electives from approved list and three semesters (12 hours) of an Asian language.

Hours req.: 26

Teaching Minor

See Multicultural Education in the Secondary Education section of this catalog for requirements.

List of Courses

Anthropology
341R Japan
343 Chinese Culture and Society
421 Business and Japanese Society

Art

213 Survey of Oriental Art and Architecture
323 Japanese Art
415R Special Topics and Readings in Art History

Business Management

430 Introduction to International Business

Economics

230 Economic Development
257 International Trade and Finance

Geography

470 Asia

History

324 Communist China
340 Premodern Asia
341 Modern Asia
342 Korean
343 Chinese Civilization
344 Modern China Since 1800
345 Premodern Japan
346 Modern Japan
350 History of Asian Religions and Thought
395R Special Topics in Asian History

Humanities

240 Introduction to the Humanities of Asia
342 Oriental Mythologies

Languages

Chinese (Mandarin)
327 Chinese Translation and Interpretation
343 Chinese Literature in Translation—Poetry
344 Chinese Literature in Translation—Prose
345 Chinese Culture
347 Business Chinese
441, 442 Classical Documentary Chinese
443 Modern Chinese Literature
444 Contemporary Chinese Literature

Japanese

343 Japanese Literature in Translation—Poetry, Drama
344 Japanese Literature in Translation—Prose
345 Japanese Culture
353 The Modern Japanese Novel in Translation
441 Introduction to Classical Japanese
443 Advanced Readings and Grammar
444 Modern Japanese Literature

Korean

340 Introduction to Traditional Korean Literature
344R Korean Literature in Translation
345 Korean Culture and Society
441 Korean Documents
443 Modern Korean Literature

Political Science

353 Government and Politics of China and Southeast Asia
354 Government and Politics of Japan and Korea

- 384 U.S.–Japan Relations
 385 International Relations of Asia
 399R Washington Seminar (internship dealing with Asia—see coordinator of Asian Studies)

Religious Education
 351 The Gospel and the World's Religions

Asian Studies (Asian)

Undergraduate Courses

330R. Asian Studies Abroad. (1–5:Arr.:Arr. ea.)

Preparatory course approved for Asian Seminar (Study Abroad).

395. Asian Studies Methods Seminar. (3:3:0)
 Required of all Asian Studies majors early in the program.

Sources, materials, and methods of research and writing; critical analysis of research project.

495. Senior Seminar. (1:1:0)

Learning research and writing skills necessary to prepare and present major senior research paper.

Advanced Undergraduate or Graduate Course

501R. Intensive Introduction to Asian Studies for Teachers and Prospective Teachers. (1–3:Arr.:0 ea.)

Readings, lectures, individual study, and curriculum development; integration for school teachers of Asian Studies into the curriculum of social studies, world history, and geography.

Canadian Studies

Program Advisory Committee

For information see coordinator.

Programs and Degrees

BA Canadian Studies

This program is intended in many instances to be a second major, adding a strong Canadian Studies dimension to the student's initial major. All majors and minors are encouraged to participate in the Quebec Summer Language Program at Laval University or in other residence programs in Canada.

Program Requirements

BA Canadian Studies

I. Although not formally required, it is nevertheless strongly recommended that Canadian Studies majors possess a proficiency in French adequate for oral

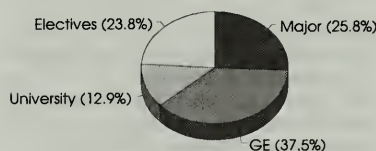
comprehension, speaking, and research in the student's specialized field. The completion of Fren 321 with a grade of B or better or the successful completion of an oral and written examination administered by a member of the Canadian Studies faculty committee will qualify the student for a special certificate of proficiency.

II. Required courses (18 hours): Anthr 312, 317; Engl 395R; Geog 450; PlSc 355, 382.

III. 15 hours from list of elective courses.

IV. No D credit may be counted toward the major or minor.

Summary of Degree Requirements for BA Canadian Studies



1. Total hours	128.0
2. Major hours [♦]	33.0
3. General Education requirements	48.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	15.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	30.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

[♦]Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor

The minor must include at least 18 hours of course work, with courses selected by the student with the prior approval of the coordinator. The minor should include a core of courses that will enhance the student's postgraduate education options or ability to secure employment.

List of Courses

The student will select 15 hours of elective courses dealing with Canada from the following list, with no more than 6 hours coming from the same discipline:

Anthropology
 312 Intercultural Communication
 317 Native Peoples of North America

English
 395R (section on Canadian Literature)

French
 439 Francophone Literature (in French)

Geography
 450 North America

Geology
 512 Geology of North America

History
 359 Inter-American Relations (emphasis on Canada)
 390R Special Topics in History (emphasis on Canada)

Political Science
 355 Canadian Government and Politics
 382 International Relations of North America
 399R Washington Seminar (internship dealing with Canada—see director of undergraduate studies for approval)

European Studies

Program Advisory Committee

For information see coordinator.

Programs and Degrees

BA European Studies

European Studies offers a liberal arts education for those who wish to enhance their understanding and appreciation of European cultures. The major consists of two sections: the core that lays the foundation, and electives through which the student can focus on Europe through a particular country or historical period.

Language Double Major. Within European Studies there are double major tracks complementing majors in German, French, and Russian. Potential language or European Studies majors should consider this double major option. See the director of undergraduate studies for more information.

Study Abroad. Many hours earned in the European Study Abroad programs may be applied toward a European Studies major or minor.

BA European Studies

I. Foundation courses

A. Core prerequisites:

- History of Civilization sequence (Recommended: Hist 201, 202).
- Inquiry course: *One of the following (Note: Some of these may have prerequisites):* Anthr 305, Art 298, CLit 310, Econ 280, Engl 251, 351, Hist 200, Hum 350,

403, Phil 205, PlSc 200, Psych 300, Soc 300.

B. Core (15 hours):

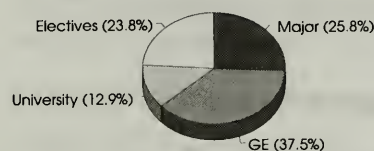
1. Geog 460.
2. Anthr 312.
3. Hist 323
4. One ancient or medieval course from Art 302, 303, 304, 306, 307, Hist 304, 307, 310, 311, Hum 401R, 404R, 405R (ancient or medieval European subject), Phil 201.
5. One modern course from Art 309, 310, 314, Econ 215, 273, Hist 312, 315, 319, 320, 322, Hum 401R, 402R, 404R, 405R (modern European subject), Music 395, Phil 202, 318, PlSc 350, 351, 356.

II. Four elective courses (may be in an area of specialization, e.g., discipline, period, or country). Choose from approved list below (12 hours).

III. Two literature or culture courses taught in major European language (6 hours).

IV. No D credit is accepted for major courses.

Summary of Degree Requirements for BA European Studies



1. Total hours	128.0
2. Major hours ♦	33.0
3. General Education requirements	48.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	15.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	30.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor

I. Core (12 hours): Same as the major above except delete Anthr 312.

II. Electives (6 hours): Two courses from the approved list below.

III. Language requirement: Fill the GE language requirement in a modern European language.

List of Courses

Art

- 210 Survey of Western Architecture
- 212 Survey of Western Art 2
- 306 Italian Renaissance Art
- 307 Northern Renaissance
- 309 Nineteenth-Century European Art
- 310 Modern Art
- 314 Southern Baroque Art
- 415R Special Topics and Readings in Art History

Comparative Literature

- 310 Introduction to Literary Analysis and Comparative Literature
- 420R Studies in Periods and Movements
- 430R Studies in Literary Genres
- 440R Studies in Themes and Types
- 450R Studies in Literary Relations

Dutch

- 340 Introduction to Dutch Literature

Economics

- 215 History of Economic Thought
- 241 Comparative Economic Systems
- 257 International Trade and Finance
- 273 European Economic History
- 280 Introduction to Economic Analysis and Reasoning

English

- 236 Masterpieces of English Literature
- 333 The English Novel
- 338 European Novel
- 341 English Drama
- 371 English Literature to 1500: The Medieval Period
- 372 English Literature from 1500 to 1660: The Renaissance Period
- 373 English Literature from 1660 to 1780: The Classical Period
- 374 English Literature from 1780 to 1832: The Romantic Period
- 375 English Literature from 1832 to 1890: The Victorian Period
- 376 English Literature from 1890 to 1950: The Modern Period
- 382 Shakespeare
- 383 Milton

European Studies

- 336 Study Abroad Program

French

- 441 French Literature—Middle Ages and Sixteenth Century
- 442 French Literature—Seventeenth and Eighteenth Centuries
- 443 French Literature of the Nineteenth Century
- 444 French Literature of the Twentieth Century
- 445 French Civilization from the Beginning to 1589

446 French Civilization from 1589 to the Present

Geography

- 120 Geography and World Affairs
- 301 Introduction to Cultural Geography
- 341 Political Geography
- 465 Commonwealth of Independent States (formerly U.S.S.R.) and Its Satellites

German

- 330 Cultural History of German-speaking Peoples
- 430 Masterpieces of German Literature 1
- 431 Masterpieces of German Literature 2
- 440R German Literary Periods and Movements
- 441R Studies in German Literary Genres
- 442R Major German Authors
- 496R Senior Seminar in German Literature

History

- 310 The Early Middle Ages
- 311 The Late Middle Ages
- 312 The Renaissance: Age of Transition
- 313 The Reformation: Age of Turmoil
- 315 The Overseas Expansion of Europe
- 316 Foundations of Modern Diplomacy
- 318 European Jews and the Holocaust
- 319 Ideas and Man in the Modern World
- 320 The Age of Enlightenment
- 321 War and Peace in the Modern World
- 322 Nineteenth-Century Europe
- 323 Europe in the Twentieth Century
- 327 Society in Europe
- 329 Austrian Empire
- 330 Tsarist Russia
- 331 The Commonwealth of Independent States (formerly U.S.S.R.)
- 332 France
- 333 Modern Germany
- 334 Spain
- 335 English History to 1689
- 336 English History Since 1689
- 337 Scandinavian History
- 394R Special Topics in European History
- 440 Great Cities of the Western World
- 498R Directed Readings (European History)

Humanities

- 202 Arts and Letters of Western Civilization 2: Late Renaissance to Modern
- 270 European Humanities and the Arts (Study Abroad only)
- 401R Topics in Humanities (European topic)
- 404R Period Studies and the Problem of Periodization (European topic)

Italian

- 441 Italian Literature of the Late Middle Ages and Renaissance
- 442 Italian Literature of the Baroque and Enlightenment Period
- 443 Italian Literature of the Romantic Period

- 444 Italian Literature of the Twentieth Century
 445 Italian Civilization from the Beginning to 1600
 446 Italian Civilization from 1600 to Modern Era
 460 Dante's *Divine Comedy*
 490R Individual Study in Italian

Music

- 301 Survey of Music Literature 1

Philosophy

- 201 History of Philosophy 1
 202 History of Philosophy 2
 371R Figures in Philosophy (European)
 372R Topics in Philosophy

Political Science

- 150 Comparative Government and Politics
 350 The Political System of the Commonwealth of Independent States (formerly U.S.S.R.)
 351 British Government and Politics
 356 French, German, and Italian Government and Politics
 383 Soviet Foreign Relations
 386 World Communism
 399R Washington Seminar (internship dealing with Europe—see chair for approval; 6-hour maximum)

Portuguese

- 345 Portuguese Culture
 441 Survey of Portuguese Literature

Russian

- 240 Russian Literature in Translation
 245 Cultural Survey of Russia
 441 Survey of Russian Literature in the Nineteenth Century
 442 Survey of Russian Literature in the Twentieth Century
 490R Special Studies in Russian

Scandinavian

- 344R Topics in Scandinavian Studies
 401 Cultural History of Scandinavia
 441 Danish and Norwegian Literature
 445 Swedish Literature
 447 Finnish Literature

Spanish

- 345 Iberian Civilization
 441 Survey of Spanish Literature
 522 History of Spanish Language
 540 Medieval Spanish Literature
 543 Golden Age Literature
 544 Don Quijote
 546 Nineteenth-Century Spanish Literature
 548 Twentieth-Century Spanish Literature
 549R Special Topics (Spanish Literature)

European Studies Course (Europ)**336R. European Studies. (1–6:Arr.:Arr.ea.)**

Social sciences core course approved for Study Abroad programs in London, Vienna, Paris, and other locations.

International Relations**Program Advisory Committee**

For information see coordinator.

Programs and Degrees**BA International Relations**

The international relations major is a multidisciplinary program designed to familiarize students with politics, economics, history, and geography, as well as to develop cultural sensitivity. Students must be able to integrate information about international issues from diverse academic disciplines such as anthropology, sociology, business, languages, and intercultural studies. It prepares students for a number of different careers in both the public and private sector as well as graduate study in international affairs and advanced professional degrees (law, MBA, etc.).

Students who plan no formal education beyond the BA degree should take a double major or develop adequate skills through other courses outside the major that will enhance their employment opportunities. Please consult with the college advisement center for suggested majors or skills.

Students anticipating a professional or graduate program should consult with the advisement center for recommended courses to strengthen their qualifications for professional or graduate studies.

As a general policy, a semester program in cooperative education will be worth up to 6 credit hours toward electives, and a term program will be worth 3. On a case-by-case basis, a student may petition for additional credit. Prior approval must be obtained from the director of undergraduate studies.

Program Requirements**BA International Relations**

- I. Prerequisite (12 hours): Econ 110, Geog 120, PlSc 170, 200.

These courses must be completed before any other required courses. Average GPA of four courses must be at least 2.7, with no grade lower than a C–. Each course may be repeated once.

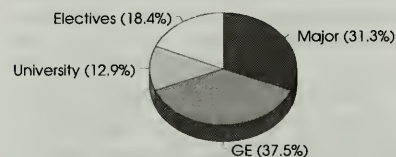
- II. Required (15 hours): Anthr 312; PlSc 370; Hist 374 or PlSc 376; Econ 257 or PlSc 372 or BusM 430; RelC 351 (also fulfills a university religion requirement); IntR 499R.

- III. Elective courses (15 hours): Five courses from the approved list. Courses must be in an area studies or issue area “track” (e.g., European Studies, international development, international trade and finance, foreign policy analysis, etc.). A list of suggested tracks is available in 237 HRCB; students should consult with the

International Relations advisor regarding the creation of their own unique track.

IV. Foreign language: A fifth-semester course (in grammar, literature, or composition) or the equivalent in a foreign language.

V. No D credit will be accepted for major courses.

Summary of Degree Requirements for BA International Relations

- | | |
|--|-------|
| 1. Total hours | 128.0 |
| 2. Major hours* | 40.0 |
| 3. General Education requirements | 48.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 15.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 23.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor

- I. Required courses: PlSc 170, 370.
 II. Elective courses: 9 hours from the following list of courses.

List of Courses**Anthropology**

- 312 Intercultural Communication
 325 Latin American Society
 326 Central American Society
 327 Ethnography of Andean Society
 330 Peoples of Africa
 340 Peoples of the Near East
 341 Japan
 421 Business and Japanese Culture
 432 Political and Legal Institutions
 433 Economic Institutions
 439 Theory of Complex Societies

Business Management

- 430 Introduction to International Business

431 International Marketing
432 International Corporate Finance

Economics

230 Economic Development
241 Comparative Economic Systems
257 International Trade and Finance
440 Economics of Natural Resources
445 Resource Economics: Energy and Environment
450 Economics of Financial Markets
458 International Trade Theory
459 International Monetary Theory

European Studies

336 European Studies

Geography

120 Geography and World Affairs
301 Introduction to Cultural Geography
331 Economic Geography
341 Political Geography
450 United States and Canada
455 Middle and South America
460 Europe
465 Commonwealth of Independent States (formerly U.S.S.R.)
470 Asia
471 Middle East
480 Australia and New Zealand
485 Sub-Saharan Africa

History

252 Latin America Since 1810
285 World War II
302 Medieval and Modern Near East
303 Jewish History: 70 AD to the Present
308 History of African Civilizations: Traditional Society and Culture to 1800
309 Modern African History: 1800 to the Present
315 The Overseas Expansion of Europe
316 Foundations of Modern Diplomacy
318 European Jews and the Holocaust
319 Ideas and Man in the Modern World
321 War and Peace in the Modern World
322 Nineteenth-Century Europe
323 Europe in the Twentieth Century
324 Communist China
327 Society in Europe
329 Austrian Empire
331 The USSR
332 France
333 Modern Germany
334 Spain
336 English History Since 1689
337 Scandinavia
341 Modern Asia
342 Korea
344 Modern China
346 Modern Japan
348R Topics in Modern Near Eastern History
350 History of Asian Religions and Thought
352 Modern Latin America
353 Mexico and the Caribbean
356 Brazil
357 The Indian in Latin American History
359 Inter-American Relations
374 U.S. Diplomatic History
381 The Dynamics of War

392R, 394R, 395R Special Topics Courses (Modern)

International Relations

499R Senior Seminar

Language and Literature

300-400-level literature or culture classes

Managerial Economics

458 International Economic Analysis

Political Science

170 Introduction to International Politics
200 Political Inquiry
319R Topics in American Government (credit from Washington Seminar)
339R World Energy Policy
340 Population and Hunger
342 Politics of Growth and Inequality
343 Ethnicity and Class Conflict
348 Korea, Taiwan, and Southeast Asian Politics
350 Political System of the Commonwealth of Independent States (formerly U.S.S.R.)
351 British Government and Politics
352 African Politics
353 China: Government and Politics
354 Japan: Government and Politics
355 Canadian Government and Politics
356 French, German, and Italian Government and Politics
357 Middle East: Political Systems
358 Politics and Society in Latin America
359R Topics in Comparative Government and Politics
370 Theory of International Politics
371 Foreign Policy Analysis
372 International Political Economy
373 International Law
375 International Organizations
376 U.S. Foreign Policy
377 National Security Affairs
378R Topics in Policies in World Politics
379R Topics in International Relations
381 International Relations of the Near East
382 International Relations of North America
383 Soviet Foreign Relations
384 U.S.-Japan Relations
385 International Relations of Asia
386 Communist and Post-Communist World
387 International Political Economy of Illicit Drugs
388 Chinese Foreign Policy
399R Washington Seminar (only 3 credits may count for the international relations major)
452 Islam and Middle East Politics
453 Political Violence and Terrorism
454 Jerusalem: Past, Present, Future
457 Arab-Palestinian-Israeli Conflict

Religious Education

351 The Gospel and World Religions

Sociology

323 Racial and Minority Group Relations
324 Political Sociology
325 Introduction to Sociology of Religion

335 Social Change and Modernization in Latin America
345 World Populations

International Relations Course (IntR)

499R. Seminar in International and Area Studies. (1:1:0 ea.) Prerequisite: senior standing, near completion of major, or departmental approval. For international relations majors only.

Research and writing for senior students majoring in international relations. Designed to integrate the broad field of international relations.

Latin American Studies

Program Advisory Committee

For information see coordinator.

Programs and Degrees

BA Latin American Studies

The Latin American Studies program is designed to give a rich background in the languages, culture, and conditions of Latin America. Suggested areas for the minor are business, sociology, social work, law enforcement, education, communications, youth leadership, recreation, food science and nutrition, anthropology and archaeology, teaching English as a second language, and Spanish or Portuguese.

Students are invited to consult with the director of undergraduate studies regarding selection of classes. Familiarity with Spanish or Portuguese is not necessary before entering the program.

Foreign Experience. Latin American Studies students are strongly encouraged to participate in Study Abroad programs in Mexico or Chile or in research on Latin America sponsored by some departments.

Program Requirements

BA Latin American Studies

I. Required courses (24 hours):

Anthropology
312 Intercultural Communication

Geography

455 Middle and South America

History

352 Modern Latin America

Language

One set of either

Span 321 Spanish Grammar
Span 355 Ibero-American Civilization
Span 451 Survey of Hispanic-American Literature
or

Port 321 Portuguese Grammar
Port 355 Brazilian Civilization
Port 451 Survey of Brazilian Literature

Latin American Studies
LtAm 495 Senior Seminar in Latin American Studies

Political Science
358 Politics and Society in Latin America

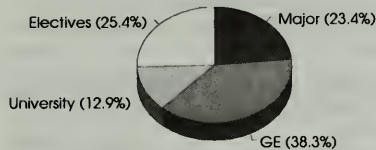
II. Complete one of the following (3 hours):

Anthropology
325 Ethnography of Latin America
326 Central American Society
327 Ethnography of Andean Society

III. Electives: Four courses (9 hours) from the list of courses that follows. One of these courses must be Hist 351, 353, 356, 357, 359, or Soc 335.

IV. No D credit will be accepted for major courses.

Summary of Degree Requirements for BA Latin American Studies



1. Total hours	128.0
2. Major hours ♦	30.0
3. General Education requirements	49.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0–16.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	32.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor

I. Span or Port 321.

II. 15 hours in courses dealing with Latin American Studies from the list of courses that follows. At least 9 of the 15 hours are to be taken from the required course list for the BA.

Teaching Minor

See Multicultural Education in the Secondary Education section of this catalog.

Elective Courses

Anthropology
326 Central American Society
327 Ethnography of Andean Society
355 Mesoamerican Archaeology
365 South American Archaeology
438 Social Stratification
439 Theory of Complex Societies

History
351 Conquest and Colonization of Latin America
353 Mexico and the Caribbean
356 Brazil
357 The Indian in Latin American History
359 Inter-American Relations
360 Hispanic Southwest

Latin American Studies
301 Preparation for Project Work in Latin America
302 Project Work in Latin America
495 Senior Seminar in Latin American Studies

Political Science
379R Topics in International Relations (dealing with Latin America)

Portuguese
Any Portuguese class from 339 to 690R with Brazilian content

Sociology
335 Social Change and Modernization in Latin America

Spanish
Any Spanish class from 339 to 697R with Spanish American content

Other electives approved by chair

Latin American Studies Courses (LtAm)

301. Preparation for Project Work in Latin America. (1:1:0) Prerequisite: Span 102 and instructor's consent.

Historical, political, and cultural background of the target country(ies); intensive training in individual service specialty.

302. Project Work in Latin America. (2:0:0) Prerequisite: LtAm 301.

Teaching literacy, health, nutrition, gardening, leadership development, construction, etc., in Latin America.

495. Senior Seminar in Latin American Studies. (3:3:0) Prerequisite: instructor's consent for minors.

Sources, materials, and methods of research and writing; critical analysis of a research project. Required for all Latin American studies majors in the senior year.

Near Eastern Studies

Program Advisory Committee

For information see coordinator.

Programs and Degrees

BA Near Eastern Studies

In addition to language study, the Near Eastern Studies curriculum includes course work from the areas of the social sciences, humanities, and religion. The geographic area covered extends from Egypt to Iran, and from Soviet Turkistan to Arabia. The time span extends from the ancient to the modern period.

The program is intended both to provide a liberal arts education and to prepare students for careers in business, law, government, scholarship, and the Church Seminaries and Institutes of Religion system.

Program Requirements

BA Near Eastern Studies

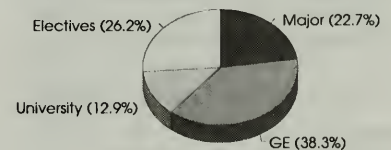
I. Required core courses (14 hours): Hist 300, 302, RelC 354, Anthr 312, Hist 490 (section by Green, Hamblin, or Montgomery, to be taken only after completing core courses and GE Advanced Writing).

II. Language requirement: 16 hours of Arabic, Hebrew, or Turkish. If Hebrew is selected, at least 12 hours must be taken in one aspect of the language (either biblical or modern). This means the student must complete at least one 200-level (or higher) course in the chosen language.

III. Electives (18 hours): The courses are to be chosen from the list below. As many as 4 hours of designated religion courses may be taken; additional language study may be counted toward elective requirements.

IV. No D credit will be accepted toward major courses.

Summary of Degree Requirements for BA Near Eastern Studies



1. Total hours	128.0
2. Major hours ♦	29.0
3. General Education requirements	49.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0–16.0
Advanced Writing	3.0

4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 33.5
6. 40 hours upper-division
GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor

I. Required courses (6 hours): Either Hist 300 or 302, depending on ancient or modern language emphasis, and one core course from the list above.

II. Language (12 hours of one language): Arabic, Turkish, or Hebrew. A 200-level or above class must be taken.

III. Electives (12 hours) chosen from the list below. As many as 2 hours of designated religion courses and 4 additional hours of language may be taken.

Teaching Minor

See Multicultural Education in the Secondary Education section of this catalog.

Jerusalem Program

Credit toward completion of the BA and minor elective requirements can be obtained through participation in the Jerusalem Program: 5 hours from NES 336, 347, and 349 and 4 hours of religion for the major; 4 hours from NES 336, 347, and 349 and 2 hours of religion for the minor. Other courses taken in Jerusalem must be evaluated individually before credit can be applied to the major.

List of Courses

Anthropology

- 312 Intercultural Communication
- 340 Peoples of the Middle East
- 351 Biblical Archaeology
- 378 Near Eastern Archaeology

Art

- 301 The Art of Egypt and Mesopotamia

Geography

- 471 Geography of the Near East

History

- 300 Ancient Near East
- 302 Medieval and Modern Near East
- 303 Jewish History: 70 A.D. to the Present
- 318 European Jews and the Holocaust
- 348R Topics in Modern Near Eastern History
- 395R Special Topics in Asian History (Asiatic Russia)
- 490 Historical Research and Writing

Humanities

- 242 Introduction to the Humanities of the Islamic World

Languages

- Arabic
 - 101/102 First-Year Arabic—Standard, Written
 - 201 Second-Year Arabic—Standard, Written
 - 211R Second-Year Conversation
 - 231/232 Arabic—Egyptian Dialect
 - 301 Intermediate Arabic—Standard, Written
 - 311R Third-Year Conversation
 - 331 Second-Year Arabic—Egyptian Dialect
 - 431 Intermediate Arabic—Egyptian Dialect
 - 451 Advanced Grammar Review
 - 452 Newspaper Arabic
 - 453 Readings in Social Sciences
 - 461 Survey of Modern Arabic Literature
 - 462 Survey of Medieval Arabic Literature
 - 471 Structure of Arabic
 - 490R Independent Readings
- 531R Advanced Topics in Arabic
- Hebrew
 - 101/102 First-Year Modern
 - 131/132 First-Year Biblical
 - 201 Second-Year Modern
 - 301 Selected Readings—Modern
 - 311R Intermediate Conversation
 - 331 Readings in the Hebrew Scriptures 1
 - 431 Readings in the Hebrew Scriptures 2
 - 441 Postbiblical Hebrew: Mishnah
 - 442 Postbiblical Hebrew: Medieval Rabbis
 - 443 Postbiblical Hebrew: Modern Biblical Commentaries
- 531R Advanced Study
- Near Eastern Languages
 - 321R Studies in Modern Languages
 - 340 Ancient Near Eastern Mythology
 - 345 Texts and Ancient Temples
 - 511R Studies in Ancient Languages

Near Eastern Studies

- 326 Introduction to Near Eastern Studies
- 336 Ancient Near Eastern Studies
- 347 (NES-Hist) Arab and Islamic Civilization
- 349 (NES-Hist) Jewish Civilization
- 499R Special Topics

Philosophy

- 372R Special Topics in Philosophy (Jewish)

Political Science

- 339R (Near Eastern topic)
- 357 Political Systems of the Middle East
- 359R (Near Eastern topic)
- 378R (Near East or Africa)
- 379R (Near Eastern topic)
- 399R Washington Seminar (internship dealing with the Near East—see coordinator for approval)

Religious Education

- 200 Biblical Studies (Jerusalem Program only)
- 211/212 The New Testament
- 300 Biblical Studies (Jerusalem Program only)
- 301/302 The Old Testament
- 304 Writings of Isaiah
- 351 The Gospel and the World's Religions
- 354 Judaism and Islam

Near Eastern Studies (NES)

Undergraduate Courses

101R. Topics in Near Eastern Studies.

(1–3:Arr.:Arr. ea.)

Studies based on individual and program needs. Elective credit for major and minor. Offered at Jerusalem Center for Near Eastern Studies.

136. Introduction to Near Eastern Studies. (2:2:1)

Survey core course in social science/humanities; offered as part of summer term program at Jerusalem Center for Near Eastern Studies. Elective credit for major and minor.

326. Introduction to Near Eastern Studies. (2:2:1) Prerequisite: at least junior class standing.

Social science/humanities core course. Elective credit for major and minor. Offered as part of Jerusalem Center for Near Eastern Studies summer semester program. Does not receive GE credit.

336. Ancient Near Eastern Studies. (3:3:2)

Social science/humanities core course emphasizing ancient history extending to the Byzantine period. Elective credit for major and minor. Offered at Jerusalem Center for Near Eastern Studies.

347. (NES-Hist) Arab and Islamic Civilization. (2:2:1)

Social science/humanities core course covering Arab and Islamic civilization; historical evolution of Middle East to present. Overview of modern Palestinian society. Elective credit for major and minor in NES. Offered at Jerusalem Center for Near Eastern Studies. Does not receive GE credit.

349. (NES-Hist) Jewish Civilization. (2:2:1)

Social science/humanities core course; broad introduction to Jewish self-understanding and history, focusing on relationships among people, faith, and land. Elective credit for major and minor. Offered at Jerusalem Center for Near Eastern Studies. Does not receive GE credit.

398R. Advanced Topics in Near Eastern Studies. (1–3:Arr.:Arr. ea.)

Studies based on individual and program needs. Elective credit for major and minor. Offered at Jerusalem Center for Near Eastern Studies.

499R. Special Topics in Near Eastern Studies. (1-3:Arr.:0 ea.) Prerequisite: instructor's consent.

Studies based on individual and program needs.

Advanced Undergraduate or Graduate Course

595R. Near East Special Topics. (1-3:Arr.:0 ea.) Prerequisite: graduate standing and instructor's consent.

Studies based on individual and program needs.

Study Abroad

Rodney B. Boynton, Director

Study Abroad programs are open to students from all university majors. Students need not be formally admitted to BYU to participate in Study Abroad, and BYU credit may be transferred to their home institution.

In these programs students are able to further their General Education; pursue specialized courses in languages, the social sciences, humanities, fine arts, and other fields; gain valuable insights into their own country; and further international understanding.

Semester and/or term programs are offered in Chile, London, and Vienna. Term programs are also scheduled regularly in Asia, Europe, Mexico, and Africa. These programs feature intensive studies in such disciplines as the arts, history, government, and language. Specialized study in other fields, such as genealogy or design, may also be offered. For information about Jerusalem, see Travel Study.

Credit

All credit for Study Abroad programs is placed on the student's official transcript and calculated in the GPA. Students earn from 12 to 18 credit hours on a semester program and from 6 to 9 credit hours on a term program.

Note: Some university departments accept Study Abroad course credits toward their major. Several Study Abroad courses fill GE requirements in Arts and Sciences or the Foreign Language or Mathematics option. See the list of approved courses in the General Education section of this catalog or the current Class Schedule and counsel with the directors regarding specific courses.

Requirements

I. Preparation: Students are encouraged to prepare themselves in advance for this international experience. Such preparatory courses would include one year of college German for the Vienna Program and Hist 111, Hum 101, and Engl 250 for the London Program.

II. Curriculum: Each program requires all undergraduate students to be registered in the following *core* programs:

A. Jerusalem Program: See information under Travel Study.

B. London and Vienna:

European Studies 336 (1-6). Unique social science course developed specifically for each location emphasizing local and European history, government, politics, sociology, geography, and international affairs.

Humanities 270 or *Fine Arts* 270R (1-6). European humanities and the arts. Music, theatre, and structural and visual arts of the host environment and other European cultures.

Religious Education 350 (2). LDS Church's historical involvement on an international basis. Religious movements in Europe.

Language (Vienna). All students participating in the Vienna program are required to study German. Language courses will be taught at all levels to accommodate beginning to advanced students.

English 300R (1-6) (London). English literature in a cultural setting.

International Internships

The internship program in the David M. Kennedy Center for International Studies is designed to assist students in locating and tailoring an internship that fits their academic needs. It is a program for serious students who, seeing beyond the academic credit, are ready to give service and make a contribution while preparing for a career. A student may earn up to 9 credit hours depending on the length of the internship. Grading is usually on a pass/fail basis.

Students have been placed in Australia, Brazil, Japan, Mexico, West Germany, Taiwan, and Thailand, among other countries, and have worked in fields relating to their respective areas of study, e.g., communications, family sciences, engineering, marketing, and international and area studies.

Requirements

Students must:

I. Complete application (various forms, resumé, letters of recommendation, etc.) and pay application fee.

II. Have a minimum GPA of 2.5.

III. Arrange course contracts with faculty and pay tuition.

Complete information on requirements and current internships can be obtained in the Study Abroad Office (204 HRCB).

Korean

See Asian and Near Eastern Languages.

Latin

See Humanities, Classics, and Comparative Literature.

Latin American Studies

See Kennedy Center for International Studies, David M.

Law School

J. Reuben Clark Law School

Dean: H. Reese Hansen (348-A JRCB)
Associate Dean: J. Clifton Fleming (510 JRCB)
Associate Dean: Constance K. Lundberg (393-A JRCB)
Associate Dean: Scott Cameron (342 JRCB)
Assistant Dean: Kathy D. Pullins (239 JRCB)

Professors

Backman, James H. (1974) AB, Harvard U., 1969; JD, U. of Utah, 1972.
 Burns, Jean W. (1986) BA, Vanderbilt U., 1970; JD, U. of Chicago, 1973.
 Davis, Ray Jay (1979) BA, Idaho State U., 1948; JD, Harvard U., 1953; LL.M., Columbia U., 1956.
 Durham, W. Cole (1976) AB, JD, Harvard U., 1972, 1975.
 Farmer, Larry C. (1977) BS, U. of Washington, 1968; PhD, Brigham Young U., 1975.
 Fleming, J. Clifton, Associate Dean (1974) BS, Brigham Young U., 1964; JD, George Washington U., 1967.
 Floyd, C. Douglas (1980) BS, Massachusetts Institute of Technology, 1964; LL.B., Stanford U., 1967.
 Gedicks, Frederick (1990) BA, Brigham Young U., 1977; JD, U. of Southern California, 1980.
 Goldsmith, Michael (1985) BS, JD, Cornell U., 1972, 1975.
 Gordon, James D., III (1984) BA, Brigham Young U., 1977; JD, U. of California, Berkeley, 1980.
 Hafen, Bruce C., University Provost (1985) AA, 1960, Dixie Coll.; BA, Brigham Young U., 1966; JD, U. of Utah, 1967.
 Hansen, H. Reese, Dean (1974) BS, Utah State U., 1964; JD, U. of Utah, 1972.

- Kimball, Edward L. (1973) BS, LLB, U. of Utah, 1953, 1955; LLM, SJD, U. of Pennsylvania, 1959, 1962.
- Lee, Rex E., University President (1972) BA, Brigham Young U., 1960; JD, U. of Chicago, 1963.
- Lundberg, Constance K., Associate Dean (1982) BA, Arizona State U., 1968; JD, U. of Utah, 1972.
- Neeleman, Stanley D. (1978) BA, Westminster Coll., 1967; MA, George Washington U., 1969; JD, U. of Denver, 1972.
- Thomas, David A. (1974) BA, Brigham Young U., 1967; JD, Duke U., 1972; MLS, Brigham Young U., 1977.
- Wardle, Lynn Dennis (1978) BA, Brigham Young U., 1971; JD, Duke U., 1974.
- Welch, John W. (1980) BA, MA, Brigham Young U., 1970, 1970; JD, Duke U., 1975.
- Whitman, Dale A. (1992) BES, Brigham Young U., 1963; LLB, Duke U., 1966.
- Wilkins, Richard G. (1984) BA, JD, Brigham Young U., 1976, 1979.
- Williams, Gerald R. (1973) BA, Brigham Young U., 1966; JD, U. of Utah, 1969.
- Wood, Stephen G. (1976) BA, JD, U. of Utah, 1966, 1969; JSD, Columbia U., 1980.
- Worthen, Kevin J. (1987) AS, Coll. of Eastern Utah, 1978; BA, JD, Brigham Young U., 1979, 1982.

Associate Professors

- Dominguez, David (1989) BA, Yale U., 1977; JD, U. of California, Berkeley, 1980.
- Preston, Cheryl Bailey (1989) BA, JD, 1975, 1979, Brigham Young U.

Assistant Professor

- Hubbard, Heidi (1992) BA, Brigham Young U., 1983; JD, Stanford U., 1986.

Associate Law Librarians

- Conklin, Curt E., Catalog Librarian (1972) BA, MLS, Brigham Young U., 1972, 1976.
- Hill, Gary L., Public Services Librarian (1984) BA, Brigham Young U., 1972; JD, Samford U., 1976; MLL, U. of Denver, 1981.
- Lyman, Lovisa, Collection Development Librarian (1982) BA, MLS, Brigham Young U., 1967, 1981.

Assistant Law Librarian

- Sears, Dennis, Circulation Librarian (1988) BS, BA, MA, JD, Brigham Young U., 1975, 1975, 1981, 1985.

Emeriti

- Hawkins, Carl S. (1973) BA, Brigham Young U., 1948; JD, Northwestern U., 1951.
- Jacobs, Eugene B. (1981) BA, JD, U. of California, Berkeley, 1949, 1951.
- Parker, Douglas H. (1975) BA, JD, U. of Utah, 1949, 1952.
- Riggs, Robert E. (1975) BA, MA, U. of Arizona, 1952, 1953; PhD, U. of Illinois, 1955; LLB, U. of Arizona, 1963.
- Sabine, James E. (1977) BA, U. of Utah, 1930; JD, U. of California, Berkeley, 1937.

Program Requirements

See J. Reuben Clark Law School Bulletin.

Law Courses

See J. Reuben Clark Law School Bulletin for descriptions.

505. Torts 1. (3:3:0)
506. Torts 2. (3:3:0)
510. Contracts 1. (3:3:0)
511. Contracts 2. (3:3:0)
515. Civil Procedure 1. (3:3:0)
516. Civil Procedure 2. (3:3:0)
520. Real Property 1. (3:3:0)
521. Real Property 2. (3:3:0)
525. Criminal Law. (3:3:0)
535. Legal Research and Writing 1. (1.5:1.5:0)
536. Legal Research and Writing 2. (1.5:1.5:0)
541. Public Interest Law. (2:2:0)
- 599R. Externship. (1-10:0:0 ea.)
601. Accounting for Lawyers. (3:3:0)
602. Administrative Law. (3:3:0)
603. Criminal Procedure. (3:3:0)
604. Advanced Legal Writing. (2:2:0)
605. Antitrust Law. (3:3:0)
606. Anglo-American Legal History. (1-2:2:0)
607. Biblical Law. (1-2:2:0)
608. Banking Law. (2:2:0)
610. Business Associations. (4:4:0)
611. Advising Closely Held Businesses. (2:2:0)
614. Combining and Reorganizing Corporate Businesses. (2:2:0)
615. Secured Transactions. (3:3:0)
616. Commercial Paper. (3:3:0)
617. Comparative Law. (3:3:0)
618. Community Property. (2:2:0)
619. Conflicts of Law. (3:3:0)
620. Constitutional Law 1. (3:3:0)
621. Constitutional Law 2. (3:3:0)
622. Civil Appellate Advocacy and Practice. (2:2:0)
623. Bankruptcy. (3:3:0)
624. Environmental Law. (3:3:0)
- 625R. Evidence. (3-4:4:0 ea.)
626. Constitutional Law 3. (2:2:0)
627. Consumer Protection. (3:3:0)
628. Equitable Remedies. (3:3:0)
631. Tax Planning for Individuals. (3:3:0)
632. Family Law. (3:3:0)
633. Advanced Family Law. (2:2:0)
634. Law and Economics. (3:3:0)
635. Federal Courts. (3:3:0)
638. Contemporary Legal Theory. (3:3:0)
639. International Business Transactions. (3:3:0)
640. Federal Taxation 1. (4:4:0)
641. Federal Taxation 2. (4:4:0)
642. Intellectual Property Law. (2:2:0)
643. Federal Income Taxation of Foreigners and Foreign Income. (2:2:0)
644. Insurance Law. (3:3:0)
645. American Indian Law. (3:3:0)
646. Jurisprudence. (3:3:0)
647. International Organizations. (3:3:0)
648. Workers' Compensation. (2:2:0)
650. Real Estate Finance. (3:3:0)
651. Law and Literature. (3:3:0)
652. Legislation. (2:2:0)
654. Legal History and Legal Thought. (3:3:0)
655. Labor Law. (3:3:0)
656. Public Land and Natural Resources. (3:3:0)
657. Fair Employment Practices and Standards. (3:3:0)
658. Land Use Planning. (3:3:0)
659. Public International Law. (3:3:0)
660. Professional Responsibility. (2:2:0)
661. Public Policy Negotiations. (3:3:0)
662. Securities Regulation. (3:3:0)
663. State and Local Government 1. (3:3:0)
664. Taxation of Natural Resources. (3:3:0)
666. Wills, Decedents' Estates, and Trusts. (4:4:0)
667. Roman Law. (2:2:0)
668. Legal Negotiation and Settlement. (1-3:3:0)
669. Public Employment Labor Relations. (2:2:0)
670. Advanced Real Estate Transactions. (2:2:0)
671. Oil and Gas Law. (2:2:0)
672. Securities Litigation. (2:2:0)
673. Minerals Development Law. (1-3:3:0)
674. Law Office Management. (2:2:0)

675. **Advanced Torts.** (2:2:0)
676. **Personal Property Security.** (3:3:0)
678. **Social Policy and Feminist Legal Thought.** (2:2:0)
679. **Alternative Dispute Resolution.** (2:2:0)
680. **State and Local Government 2.** (1-3:3:0)
681. **Estate and Gift Taxation.** (2:2:0)
683. **Jewish Law.** (2:2:0)
684. **Water Law.** (2:2:0)
685. **Introduction to American Law.** (3:3:0)
- 686R. **Special Topics in Law.** (2:2:0 ea.)
- 687R. **Special Topics in Law.** (1-4:0:0 ea.)
- 690R. **Directed Research.** (1-2:0:0 ea.)
- 691R. **Directed Readings.** (1-2:0:0 ea.)
- 692R. **Cocurricular Programs.** (1:0:0 ea.)
- 693R. **Third-Year Cocurricular Writing.** (1-2:2:0 ea.)
- 695R. **Law School Seminars.** (1-18:0:0 ea.)
- 696R. **Law School Seminars.** (1-18:0:0 ea.)

Library and Information Sciences

School closed August 31, 1993.

Emeriti

- Johnson, H. Thayne (1965) BA, MA, Brigham Young U., 1950, 1952; MS, U. of Southern California, 1959.
- Marchant, Maurice P. (1969) BA, MS, U. of Utah, 1949, 1953; MLS, MA, PhD, U. of Michigan, 1966, 1968, 1970.
- Purdy, Victor William (1954) BS, Brigham Young U., 1952; MS, Columbia U., 1957.
- Shields, Dorothy M. (1974) BA, Muskingum Coll., 1952; MLS, Case Western Reserve U., 1964; EdD, Brigham Young U., 1977.
- Wright, H. Curtis (1969) BA, MA, Brigham Young U., 1954, 1955; BA, U. of Southern California, 1959; MS, PhD, Case Western Reserve U., 1968, 1969.

Linguistics

Melvin J. Luthy, Chair (2129 JKHB)

Professors

- Baird, Rey L. (1961) BA, U. of Utah, 1960; MA, Brigham Young U., 1962; PhD, Indiana U., Bloomington, 1974.
- Blair, Robert W. (1959) BA, MA, Brigham Young U., 1955, 1957; PhD, Indiana U., Bloomington, 1964.

- Luthy, Melvin J. (1971) BS, Utah State U., 1962; PhD, Indiana U., Bloomington, 1967.
- Melby, Alan K. (1977) BS, MA, PhD, Brigham Young U., 1973, 1974, 1976.
- Robertson, John S. (1977) BA, MA, Brigham Young U., 1967, 1970; PhD, Harvard U., 1976.

Senior Lecturer

- Probst, Glen W. (1980) BA, MA, Brigham Young U., 1961, 1966; PhD, Ohio State U., 1969.

Associate Professors

- Brown, Cheryl (1975) BA, MA, Utah State U., 1967, 1971; TESL Cert., Brigham Young U., 1974; PhD, U. of California, Los Angeles, 1983.
- Graham, Charles Ray (1980) BA, MA, Brigham Young U., 1967, 1969; PhD, U. of Texas, Austin, 1977.
- Hendrichsen, Lynn E. (1992) BA, MA, Brigham Young U., EdD, U. of Hawaii, Manoa, 1987.

Assistant Professors

- Scott, Mary Lee (1990) BA, MA, Brigham Young U., 1975, 1980; PhD, U. of California, Los Angeles, 1989.
- Shelley, Monte (1976) PhD, U. of California, Los Angeles, 1983.

Assistant Lecturers

- Farnes, Darlene (1989) BA, MA, Brigham Young U., 1971, 1974.
- Strong-Krause, Diane (1979) BA, MA, Brigham Young U., 1975, 1976.

Special Instructors

- Bay, Ana Preto (1990) BA, U. of Lisbon, Portugal, 1985; MA, U. of Utah, 1987.
- Giraldo, Nancy L. (1991) BA, TESL Cert., MA, Brigham Young U., 1990, 1990, 1991.
- Hall, Timothy C. (1991) BA, Ealing Coll. of Higher Ed., England, 1970; Cert. in Ed., Huddersfield Polytechnic, 1975; TESL Cert., MA, Brigham Young U., 1990, 1991.
- Sellers, Sherrie R. (1992) BA, Utah State U., 1967; TESL Cert., MA, Brigham Young U., 1989, 1991.
- Spencer, Carolyn M. (1991) BA, TESL Cert., MA, Brigham Young U., 1961, 1989, 1991.

The following are linguists in other departments who frequently teach linguistics courses in their own department or in the Department of Linguistics and who also serve on graduate and other committees for the Linguistics Department.

- Belnap, R. Kirk (Asian and Near Eastern Languages)
- Bourgerie, Dana (Asian and Near Eastern Languages)
- Brown, Bruce L. (Psychology)
- Bush, Charles D. (Humanities Research Center)
- Clegg, J. Halvor (Spanish and Portuguese)
- Eggington, William G. (English)
- Hallen, Cynthia (English)
- Hart, David Kay (Germanic and Slavic Languages)
- Jones, Randall L. (Germanic and Slavic Languages)

- Larson, Jerry W. (Humanities Research Center)
- Lund, Randall J. (Germanic and Slavic Languages)
- Matthews, Thomas J. (Spanish and Portuguese)
- Meredith, R. Alan (Spanish and Portuguese)
- Oaks, Dallin D. (English)
- Parkinson, Dilworth B. (Asian and Near Eastern Languages)
- Russell, Robert A. (Asian and Near Eastern Languages)
- Skousen, Royal (English)
- Smith, Kim L. (Humanities Research Center)
- Smith, Melvin R. (Humanities Research Center)
- Watabe, Masakazu (Asian and Near Eastern Languages)

Programs and Degrees

BA	Linguistics
MA	Linguistics
TESL	Certificate
MA	TESL

Departmental programs provide course work in principles of language, theory of language, language universals, language acquisition, and computational linguistics. Options allow students to pursue a traditional track or more specialized training in language acquisition or computer applications to language. The BA serves as a necessary background for such advanced studies in language as computer processing of natural languages and also provides strong undergraduate preparation for graduate professional schools.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

No D credit is acceptable in course work.

BA Linguistics

I. Linguistics core: Ling 230 (to be taken first semester of program), 330, 420, 430, 450, 490.

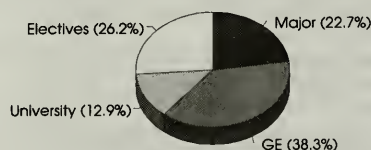
II. Language core: 12 credit hours of university-level course work in a single non-Indo-European language. Students minoring in a non-IE language (see III.A below) may fill this requirement with any other foreign language of their choice.

III. Elective course work as specified in either option A or B below.

- Approved university minor in one of the following areas: foreign language (cannot be in language area used to fill section II above), TESL, language and computers, or speech pathology.
- 15 credit hours selected from the following courses or other courses

approved by the Linguistics Department:
Ling 260, 362, 363, 365, 431, 480, Engl
324, 325, 326, Anthr 309, 420, Phil 313,
Psych 375, 376.

Summary of Degree Requirements for BA Linguistics



1. Total hours	128.0
2. Major hours	29.0
3. General Education requirements	49.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	0-16.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	33.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Linguistics Minor

- I. Ling 230, 330, 450.
- II. 6 hours of electives selected from other Linguistics Department course work in consultation with department advisor.

Language and Computers Minor

Ling 230 (prerequisite), 260, 330; 362 or 363; 365; 480 or 565R.

Teaching English as a Second Language (TESL) Section

The TESL program exists primarily to prepare teachers of English for speakers of other languages. Related areas of emphasis are administration or materials development. TESL involves multidisciplinary course work, notably in language pedagogy and linguistics, but includes subjects ranging from testing to literature.

TESL graduates are qualified for overseas English teaching or administrative positions. They may enter U.S. TESL programs or bilingual programs, ranging from adult

education or junior college positions to special courses for immigrant children offered by school districts. A state teaching certificate qualifying one to teach ESL is available to those who take requisite professional education course work in addition to TESL classes.

Special Provisions

TESL has been accepted by the Utah Board of Education as an accredited teaching major or minor for secondary education students. BYU TESL courses *plus* professional course work can lead to a state secondary teaching certificate in ESL. Those students seeking state teacher certification on a secondary level may obtain further information on this option by contacting the Linguistics Department. *This option is essential for those planning to teach ESL in U.S. public schools.*

Undergraduate ESL Service Courses

Although all undergraduate students at BYU are required to satisfy the university English composition requirements as given in the General Education section of this catalog, additional courses are provided for undergraduate and graduate students who are nonnative speakers of English: ESL 301 (structure), 302 (oral/aural), 303 (reading), 304 (writing), and 404 (advanced composition). Placement in these classes is determined by a BYU foreign-student English placement test administered just before the beginning of each semester. Normally, 301 is a prerequisite for 404; however, 302 and 303 may be taken concurrently with either 301 or 304.

English as a Second Language (ESL)

Undergraduate Courses

Note: For TESL teacher training courses, see Linguistics in the BYU 1993-94 BYU Graduate Studies Catalog.

300. English as a Second Language. (3:0:0)

Basic language skills including listening, speaking, reading, writing, and grammar.

301. English as a Second Language (Structure). (4:4:1) For bilingual foreign students.

Integrated skills course in listening, speaking, reading, and writing, with grammar focus in each area.

302. English as a Second Language (Oral-Aural). (2:2:0) For bilingual foreign students.

Improving listening comprehension and speaking ability. Emphasizes fluency, correct pronunciation, and intonation.

303. English as a Second Language (Reading). (3:3:0) For bilingual foreign students.

Improving reading comprehension and reading speed.

304. English as a Second Language (Writing). (4:4:1) For bilingual foreign students.

Composition, rhetoric, usage, and mechanics, plus techniques of writing research papers.

404. ESL Advanced Composition. (3:3:0)

Research and writing techniques for prethesis work. For graduate ESL students.

TESL Minor

Ling 230, 330, 531, 540, 572, 577. See also English as a Second Language in the Secondary Education section of this catalog.

Linguistics (Ling)

Undergraduate Courses

98. Basic Academic Computer Skills. (0:2:0)

Introduction to academic computer skills, focusing on programs for writing student papers (no technical background necessary). Fee.

101R. Study of an Uncommon Language. (4:4:0 ea.)

Oceanic, American Indian, African, Haitian Creole, Persian Farsi.

102R. Study of an Uncommon Language. (4:4:0 ea.) Prerequisite: Ling 101R or equivalent.

Oceanic, American Indian, African, Haitian Creole, Persian Farsi.

201R. Second-Year Study of an Uncommon Language. (4:4:0 ea.) Prerequisite: Ling 101 and 102 or foreign residence experience.

Further development of conversation, reading and writing skills, and vocabulary building, emphasizing reading.

211R. Second-Year Study of an Uncommon Language. (2:2:0 ea.) Prerequisite: Ling 201 or foreign residence experience.

Conversation, emphasizing further development of intermediate listening comprehension and speaking skills.

230. Language, Mind, and the World. (3:3:0)

The medium that makes thinking, understanding, communications, and teaching possible.

260. Humanities Computing Survey. (3:3:0) Prerequisite: Ling 98 or equivalent.

Survey of how computers are used in humanities disciplines: databases, concordances, literary analysis, computer-assisted instruction, writing and publishing, computational linguistics.

270. Course for Prospective Language Learners. (3:3:1)

For prospective missionaries and others desiring fundamentals of language learning before selecting a specific language. Principles and strategies for efficient second-language learning; includes minicourse language learning experiences.

301R. Third-Year Study of an Uncommon Language. (4:4:0 ea.)

Oceanic, American Indian, African, Haitian Creole, Persian Farsi.

311R. Third-Year Study of an Uncommon Language. (2:2:0 ea.) Prerequisite: Ling 211 or foreign residence experience.

Advanced conversation.

330. Introduction to Linguistics (Modern). (3:3:0)

Basic understanding of linguistic systems. Morphology, syntax, and phonology.

362. Computer-assisted Instruction—Macintosh. (3:3:0) Prerequisite: Ling 260 or Macintosh experience.

Instructional applications of computer technology in the humanities using hypercard on Macintosh computers.

363. Computer-assisted Instruction—IBM-PC. (3:3:0) Prerequisite: Ling 260 or IBM-PC experience.

Instructional applications of computer technology in the humanities using ToolBook on IBM-PC and compatible computers.

365. Computer-assisted Research. (3:3:0) Prerequisite: Ling 260 or programming experience.

Applying computer-based techniques to research in language and literature.

420. Phonetics. (3:3:0) Prerequisite: Ling 330.

General inventory of speech sounds possible in language, from both an acoustic and articulatory point of view.

430. Transformational Grammar. (3:3:0) Prerequisite: Ling 330 or Engl 328.

Goals of linguistic argumentation, syntactic structure, nature of the lexicon, and functions of transformations.

431. Junction Grammar. (3:3:0)

Advanced study of English syntax using Lytle's theory of semanto-syntactic structure.

450. Introduction to Historical-Comparative Linguistics. (3:3:0) Prerequisite: Ling 330.

Theory and method of language change via comparison of daughter languages and reconstruction of their ancestral language: phonological, morphological, semantic, and lexical.

480. Problems in Translation. (3:3:0) Prerequisite: proficiency in a second language.

History, theory, and practice of human or machine translation.

490. Senior Seminar. (2:2:0) Prerequisite: completion of all course work required for undergraduate major and departmental approval.

Reading and discussing major issues in linguistics.

Advanced Undergraduate or Graduate Courses**500. Bibliography and Research. (1:2:0)**

Procedures for developing research projects and reporting on their results; priority given to major papers and MA thesis projects.

521. Phonology. (3:3:0) Prerequisite: Ling 330.

Discriminative values of speech sounds: their function in the communicative process. Analysis of phonological data via postulation of underlying forms and derivational rules.

525. Phonology of Modern English. (3:3:0)

Articulatory phonetics (phonemics), intonation, and contrastive analysis of English sounds with those of other languages. Strong practicum included.

531. Grammar Usage. (3:3:0)

Examining English grammar and usage as they reflect different theories about language description and applying this knowledge in the ESL classroom.

535. Semantics. (3:3:0) Prerequisite: Ling 330.

Theory and practice of semantic analysis with special emphasis on Jakobsonian and Peircean semiotics.

540. Language Acquisition. (3:3:0)

Prerequisite: Ling 330 or equivalent.

First- and second-language acquisition viewed in light of psycholinguistics and sociolinguistics.

550. (Ling-Anthr) Sociolinguistics. (3:3:0)

Research and theory in anthropological linguistics and sociolinguistics.

551. (Ling-Anthr) Anthropological Linguistics. (3:3:0)

Language in culture and society: development, typology, and description.

555. Teaching Culture. (3:3:0)

Experience developing materials and activities dealing with typical patterns of U.S. life-style. Variety of readings.

565R. Humanities Computing Project. (1-3:3:0 ea.) Prerequisite: instructor's consent.

Major application or research project, working with instructor to do ongoing research or program development.

572. TESL Reading-Writing. (3:3:0)

Basic techniques for teaching ESL skills in reading and writing; applying these skills in the classroom.

573. TESL Literature. (3:3:0) On dem.

Teaching literature to nonnative English speakers, both TEFL and TESL.

577. Introduction to ESL Methodology. (4:4:1) Prerequisite: ESL 404 or native English speaker.

Instruction in basic second language methodology, ESL teaching techniques, and materials selection. Actual ESL class observation and practice.

579. TESL Student Teaching. (2:0:8)

Prerequisite: Ling 577 and advance departmental approval.

580R. Problems in Linguistics and Applied Linguistics. (1-3:3:0 ea.) On dem.

Advanced research in language acquisition, sociolinguistics, psycholinguistics, linguistics field study, applied linguistics.

590R. Readings in Linguistics. (1-3:Arr.:0 ea.) Prerequisite: instructor's consent.

Individual study of current linguistic literature. Occasional discussion sessions with instructor and other class members. Pass/fail grade only.

599R. Cooperative Education. (1-9:9:0 ea.) On dem.

On-the-job experience under faculty supervision.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

600. Research Design and Bibliography. (3:3:0)**630. Syntactic Theory. (3:3:0)****641. Interlanguage Analysis. (3:3:0)****660. Language Testing. (3:3:0)****677. Advanced Methodology. (3:3:3)****678. Materials Development. (3:3:0)****679. TESL Supervision-Administration Internship. (3:1:2)****690. Seminar in Linguistics. (2:2:0)****695. TESL Seminar. (1:1:0)****699R. Master's Thesis. (1-9:Arr.:0 ea.)****American Sign Language (ASL)****Undergraduate Courses**

(Available only through Evening Classes.)

101. Conversation ASL. (4:4:1)

Introduction to native speaker experience, emphasizing receptive skills. Background in deafness and ASL.

102. Intermediate ASL. (4:4:1)

Experience in the deaf community. Beginning translation—distinction between English signing and ASL. Continued skill development in expressive skills.

201. Advanced ASL Grammar. (4:4:0) Sign structure, syntax.

301. ASL Culture. (3:3:0)
Society and culture of the deaf community.

431. ASL Interpreting 1. (4:4:1) Independent Study also.
Interpreting skills, artistic signing (music, poetry, literature of all kinds).

432. ASL Interpreting 2. (4:4:1)
Continuation of ASL 431.

Austronesian Languages (AstLg)

Undergraduate Courses

Note: Austronesian languages are offered only when there is sufficient student interest.

Fijian, Indonesian, Maori, Niuean, Rarotongan, Samoan, Tagalog, Tahitian, and Tongan Courses

101R, 102R. First-Year. (4:4:0 ea.)
Basic language skills.

201R. Second-Year. (4:4:0 ea.) Prerequisite: 101 and 102 or equivalent experience.
Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation. (2:2:0 ea.) Prerequisite: 102 or equivalent experience.
Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation. (2:2:0 ea.) Prerequisite: 201 and 211 or equivalent experience.
Advanced conversational skills.

North, Central, and South American Indian Languages (AmILg)

Undergraduate Courses

Note: American Indian languages are offered only when there is sufficient student interest.

Navajo, Aymara, Cakchiquel, Quechua, Quiché, Maya, and Guaraní Courses

101R, 102R. First-Year. (4:4:0 ea.)
Basic language skills.

201R. Second-Year. (4:4:0 ea.) Prerequisite: 101 and 102 or equivalent experience.
Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

211R. Second-Year Conversation. (2:2:0 ea.) Prerequisite: 102 or equivalent experience.
Intermediate listening comprehension and speaking skills.

311R. Third-Year Conversation. (2:2:0 ea.) Prerequisite: 201 and 211 or equivalent experience.
Advanced conversational skills.

Welsh (Welsh)

Undergraduate Courses

101A, B. First-Year Welsh. (2:2:0 ea.)
Pronunciation, grammar fundamentals, and vocabulary building, emphasizing conversation.

102. First-Year Welsh. (4:4:0) Prerequisite: Welsh 101 or equivalent.
Pronunciation, grammar fundamentals, and vocabulary building, emphasizing conversation.

201. Second-Year Welsh. (4:4:0) Prerequisite: Welsh 101 and 102 or equivalent.
Conversation, vocabulary building, and reading and writing skills, emphasizing reading.

Management

J. Willard and Alice S. Marriott School of Management

Institute of Business Management

Scott M. Smith, Director (660-A TNRB)

Professors

Andrus, Roman R. (1976) BS, Brigham Young U., 1958; MS, PhD, Columbia U., 1959, 1965.

Call, Ivan T. (1963) BS, Brigham Young U., 1958; MBA, DBA, Indiana U., Bloomington, 1959, 1969.

Daines, Robert H. (1959) BS, Utah State U., 1956; MBA, Stanford U., 1959; DBA, Indiana U., Bloomington, 1966.

Geurts, Michael D. (1975) BS, MBA, U. of Utah, 1963, 1965; PhD, U. of Oregon, 1972.

Giauque, William C. (1977) MBA, DBA, Harvard U., 1968, 1972; BS, California Inst. of Technology, 1963.

Heaton, Hal B. (1982) BS, MBA, Brigham Young U., 1975, 1977; MA, PhD, Stanford U., 1978, 1982.

Hill, Ned C. (1987) BS, U. of Utah, 1969; MS, PhD, Cornell U., 1971, 1976.

Hunt, H. Keith (1975) BS, MBA, U. of Utah, 1961, 1962; Ph.D, Northwestern U., 1972.

McKinnon, Gary F. (1969) BS, MBA, U. of Utah, 1962, 1963; PhD, U. of Texas, Austin, 1968.

Pinegar, J. Michael (1988) BA, Brigham Young U., 1973; MBA, PhD, U. of Utah, 1979, 1982.

Rinne, Heikki (1984) BS, Brigham Young U., 1975; MBA, U. of Oregon, 1976; PhD, Purdue U., 1981.

Schill, Ronald Lynn (1971) BS, MBA, U. of Utah, 1962, 1963; PhD, U. of Oregon, 1971.

Smith, Milton E. (1966) BA, MBA, PhD, U. of Utah, 1951, 1961, 1981.

Smith, Scott M. (1981) BS, Brigham Young U., 1971; MBA, Michigan State U., 1973; PhD, Pennsylvania State U., 1979.

Stone, Bernell K. (1986) BS, Duke U., 1964; MS, U. of Wisconsin, 1966; PhD, Massachusetts Inst. of Technology, 1968.

Swinyard, William R. (1978) BS, Brigham Young U., 1965; MBA, U. of Michigan, 1967; PhD, Stanford U., 1976.

Associate Professors

Adolphson, Donald L. (1980) BA, U. of California, Berkeley, 1966; MS, PhD, U. of Wisconsin, Madison, 1968, 1973.

Cox, Charles M. (1965) BS, Brigham Young U., 1955; MBA, Harvard U., 1961; PhD, U. of Washington, 1978.

Jackson, W. Burke (1973) BS, Yale U., 1963; MBA, Rutgers U., 1964; MS, PhD, Stanford U., 1968, 1978.

Lambert, William R. (1962) BS, U. of Utah, 1953; MBA, Harvard U., 1962; DBA, Indiana U., Bloomington, 1968.

Lee, Terry Nels (1970) BS, U. of Utah, 1963; MBA, Brigham Young U., 1966; PhD, U. of Washington, 1973.

Plenert, Gerhard J. (1990) BA, MBA, California State U., Sacramento, 1970, 1983; PhD, Colorado School of Mines, 1987.

Rhoads, Gary K. (1992) BS, MBA, Idaho State U., 1978, 1982; PhD, Texas Tech. U., 1988.

Sawaya, William J., Jr. (1978) BS, U. of Wyoming, 1967; MS, PhD, Arizona State U., 1969, 1971.

Wilson, Brent D. (1982) BA, Weber State Coll., 1969; MBA, Northwestern U., 1971; DBA, Harvard U., 1979.

Assistant Professors

Beck, John C. (1989) BA, MA, PhD, Harvard, U., 1983, 1988, 1989.

McQueen, Grant R. (1989) BA, MBA, Brigham Young U., 1981, 1984; PhD, U. of Washington, 1989.

Swenson, Michael J. (1989) BS, Brigham Young U., 1980; MBA, U. of Utah, 1981; PhD, U. of Oregon, 1989.

Thorley, Steven R. (1991) BS, MBA, Brigham Young U., 1979, 1982; PhD, U. of Washington, 1991.

Whitlark, David B. (1989) BA, U. of Utah, 1978; MBA, Cornell U., 1985; PhD, U. of Virginia, 1988.

Adjunct Associate Professors

Jenkins, James (1979) BS, MS, Brigham Young U., 1965, 1967; MS, PhD, Purdue U., 1970, 1975.

Wooley, Kenneth M. (1979) BA, Brigham Young U., 1969; MBA, PhD, Stanford U., 1971, 1972.

Instructors

Murray, Robert B. (1985) BS, Utah State U., 1951; MBA, Harvard U., 1957.

Pearce, Wayne E. (1982) BS, MBA, U. of Utah, 1960, 1961.

Emeriti

Christensen, Edward L. (1953) BS, MS, PhD, U. of Utah, 1938, 1939, 1953.

Oaks, Clinton L. (1957) BA, Brigham Young U., 1948; MBA, PhD, Stanford U., 1950, 1955.

Taylor, Weldon J. (1937) BS, Brigham Young U., 1934; MBA, Harvard U., 1937; PhD, New York U., 1955.

The primary objectives of the Institute of Business Management are (1) to prepare students for responsible leadership in their chosen professions; (2) to educate those interested in careers in marketing, production, finance, financial services, entrepreneurship, and retailing; and (3) to give students a broad understanding of individual and group behavior in industry.

Both the content and instructional methods of business management courses are designed to develop qualities that will help students realize their potential. Emphasis is placed on developing analytical skill, sound reasoning, insight, and balanced judgment; understanding human problems in organizations; and becoming proficient in written and oral communication.

The Institute of Business Management also recognizes its responsibility to acquaint students with current research in the social sciences, techniques of decision making, new tools of quantitative analysis, and other applications of the management sciences. In addition, students are exposed to changing values and goals in today's society, the social responsibility of business leadership, the changing role of government in society and international trade, and the growth of multinational diversified corporations.

Students desiring an emphasis in management should initially sign up as premanagement majors as soon as they begin taking prebusiness required courses. See the MSM Advisement Center, 460 TNRB, for assistance.

To major in management or accounting, students must first make formal application to the management major. Application forms and further information are available at the MSM Advisement Center (460 TNRB).

Program Requirements

See the J. Willard and Alice S. Marriott School of Management in the Colleges section of this catalog for courses required for the management major.

Note: Acceptance into the management major is competitive, and not all students who meet the minimum GPA and course completion requirements are guaranteed entry. Students' performance in previous university work will be important to the decision.

Areas of Emphases

General Business

The general business, or open, emphasis is available to students wishing to design their own program to meet specific goals such as working in a family business or preparing for a graduate program. In addition to the core requirements, students may select any four MSM 400-level courses to meet their specific needs.

Entrepreneurship

The entrepreneurship emphasis is designed to acquaint students with the problems commonly encountered when starting, growing, and harvesting business ventures. Emphasis is on the entrepreneurial career and perspective, not on one-shot ventures. Functional topics have already been taught in the function areas and are mentioned in entrepreneurship only when a different perspective is needed.

I. In addition to core requirements: BusM 482, 483, and one of 401, 413, OrgB 531, Acc 320.

II. Elective: 3 hours from upper-division MSM courses.

Finance

The course work offered in this area is designed, first, to familiarize business students with the elements of financial management and, second, to provide specialized work for those who seek positions of management and executive responsibility in finance. The requirements are flexible enough to allow some specialization toward commercial banking, business finance, insurance, real estate, investments, or personal financial planning.

I. In addition to core requirements: BusM 401, 410, and one of 405, 407, 411, 413, 418, 432, ManEc 353.

II. Elective: 3 hours from upper-division MSM courses.

Financial Services

The financial services emphasis covers the production and distribution of financial products (including investments, loans, real estate, insurance, and depository instruments) and the decisions that households make regarding them (an area typically called financial planning). This emphasis would be particularly helpful to those considering careers with financial institutions and those interested in personal financial planning.

Required in addition to core requirements: BusM 410, 418, plus three classes from BusM 405, 407, 413, Acc 320.

Management Information Systems

The information systems emphasis prepares students for careers in areas such as systems

analysis and design, information systems consulting, and information systems management. The courses develop strength in the technical areas of programming, database design, and systems analysis and design. Significant emphasis is given to developing analytic and communications skills, with a focus on business applications. (See School of Accountancy and Information Systems for course descriptions and prerequisites.)

Required in addition to core requirements: ISys 441, 443, 445, 544, 546 (ISys 442 and 548 are recommended as electives but not required for graduation).

Marketing

The marketing emphasis is designed to prepare students for marketing management responsibilities, product/brand management, industrial and consumer products sales management, market analysis, and entrepreneurial activities both in the U.S. and abroad.

I. In addition to core requirements: BusM 442, 459, and one course from BusM 431, 444, 450, 454, 455, 456, 458R.

II. Elective: 3 hours selected from upper-division MSM courses.

Operations Management

Course work is designed for business students whose interests lie in the operations or production area of any business enterprise. Students can prepare for positions in operations or production management, purchasing, quality management, operations research, inventory control, and similar areas. In addition, many of the courses offered in this area will provide an excellent background for those interested in the increasingly important quantitative aspects of finance and marketing.

I. In addition to core courses: BusM 463 and two of BusM 461, 465, 468R, Stat 361, 462, Hlth 425 and 426, ManEc 489, MFE 340, 480, MFET 532, 534.

II. Elective: 3 hours from upper-division MSM courses.

Note: Students electing this option should be aware of prerequisites for some of the courses outside the MSM when planning their program.

Retailing

The retailing emphasis is designed to prepare students for positions in retailing management that include merchandising, financial control, sales promotion, personnel, store operations, and electronic data processing. An internship (BusM 599R) in one of the major retail stores throughout the country is required. For additional information, contact the Skaggs Institute (480 TNRB).

I. In addition to core requirements: BusM 442, 456, 459, 599R.

II. Elective: 3 hours from upper-division MSM courses.

International Business

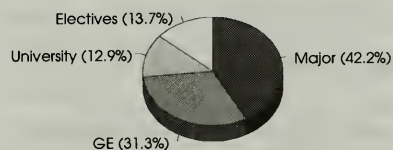
The co-concentrations in international business are designed to prepare students for careers in multinational companies or domestic firms with export sales. The concentrations have two broad objectives: developing skills in the management of foreign operations and obtaining a degree of competence in one of the functional areas of management (finance, marketing).

I. In addition to core courses: Emphasis requirements in finance, general business, or marketing.

II. BusM 430 and either 431 or 432. One of these classes may also count toward the emphasis requirements.

III. 16 semester hours in a language (or an equivalent level of competence).

Summary of Degree Requirements for Management Emphases



1. Total hours	128.0
2. Major hours ♦	54.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	17.5
6. 40 hours upper-division	
GPA requirement of 2.25	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Accessibility of Business Management Courses

- BusM 200-level courses are open to all students.
- BusM 300, 340, 380R, 381R, 382R, and 430 are open to all students. All other BusM

300-level courses are closed except to students who have been formally accepted into the Marriott School of Management or the School of Accountancy and Information Systems or have written approval from the director of the institute.

- Non-MSM students may take 400-level courses for which they have proper prerequisites and written permission of the director.

Business Management (BusM)

Undergraduate Courses

101. Readings for Managers. (0.5:0:0)

Readings in literature; discussions with management faculty. Upon acceptance to the MSM students must enroll for BusM 101. See advisement center for details.

102. Readings for Managers. (0.5:0:0)

Prerequisite: BusM 101.

Readings in literature. Second course of readings series; discussions with management faculty. See advisement center for details.

103. Readings for Managers. (0.5:0:0)

Prerequisite: BusM 102.

Readings in literature. Third course of readings series; discussions with management faculty. See advisement center for details.

104. Readings for Managers. (0.5:0:0)

Prerequisite: BusM 103.

Readings in literature. Fourth course of readings series; discussions with management faculty. See advisement center for details.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) Prerequisite: consent of both department associate director and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

200. Personal Finance. (2:2:0) Independent Study also.

Practical course in money management and utilizing savings.

210. Introduction to Investments. (3:3:0)

Security markets, selection of stocks for a portfolio, and basic investment analysis. For nonmajors.

256. Introduction to Retailing. (3:3:0)

Retail store operation, considering executive control, profit planning, merchandising, store location, layout, organization, policies, system, and coordination of store activities. For nonmajors.

300. Financial Management. (3:3:0)

Prerequisite: Acc 200 or equivalent.

For nonmanagement majors; emphasizes financial statement analysis, financial planning, sources of financing, working capital management, risk and return, and valuation.

301. Financial Management. (3:3:0)

Independent Study also. Prerequisite: Premanagement and Management cores and full acceptance into a Marriott School of Management upper-division major. Non-MSM majors must obtain special approval from associate director.

Financial management from the viewpoint of the business manager emphasizing profitability, liquidity, and long-range financial planning.

340. Marketing Management. (3:3:0)

For nonmanagement majors. Emphasizes marketing's role in society and the firm, marketing opportunities, the consumer market, and management of the marketing mix.

341. Marketing Management. (3:3:0)

Independent Study also. Prerequisite: Premanagement and Management I cores and full acceptance into a Marriott School of Management upper-division major. Non-MSM majors must obtain special approval from associate director.

Market segmentation, product service, promotion, channel, pricing strategies. Marketing principles in consumer and industrial markets, profit and nonprofit organizations, domestic and international companies, and small and large firms.

360. Operations Management. (3:3:0)

For nonmanagement majors. Overview of the operations area including planning, scheduling, inventory management, quality control, and internal flow of manufacturing information.

361. Operations Management. (3:3:0)

Prerequisite: Premanagement and Management I cores and full acceptance into a Marriott School of Management upper-division major.

Non-MSM majors must obtain special approval from the director of the Institute of Business Management. Overview of operations manager's decision areas. Designing, controlling, and managing production and delivery of product or service to the customer.

380R. Executive Lectures. (1:1:0 ea.)

Lectures by top executives on subjects significant to executive leadership.

381R. Entrepreneur Lectures. (1:1:0 ea.)

Lectures by successful entrepreneurs on subjects significant to entrepreneur-type opportunities.

382R. Executive Lectures. (1:1:0 ea.)

Special topics.

399R. Cooperative Education. (3:0:0 ea.)

Prerequisite: departmental approval.

On-the-job experience, including internships.

401. Advanced Financial Management.

(3:3:0) Prerequisite: BusM 301.

Capital budgeting, cost of capital, capital structure/dividends, mergers and acquisitions, and current financial problems.

402. Managerial Finance. (3:3:0)

Overview of financial management issues including capital budgeting, cost of capital, capital structure/dividends, and long-term financial planning. For accounting students only.

405. Management of Financial Institutions.

(3:3:0) Prerequisite: BusM 301.

Management problems of commercial bank and nonbank financial institutions, emphasizing balance sheet management, regulation, and the process of intermediation.

407. Risk Management. (3:3:0)

Pure risk in personal and business affairs, different methods of meeting pure risk exposures, insurance emphasis.

410. Investments. (3:3:0) Prerequisite: BusM

301.

Security markets, security analysis, and portfolio management.

411. Advanced Investments. (3:3:0)

Prerequisite: BusM 301, 410.

Current investment literature, efficient markets, modern portfolio theory, capital assets pricing, options pricing theory.

413. Real Estate Administration. (3:3:0)

Prerequisite: BusM 301.

Principles of property investments: determining value, financing arrangements, and marketing and management problems.

418. Financial Planning. (3:3:0)

Recommended: BusM 407, 410, 413, 416, Acc 320 (may be taken concurrently if necessary). Applying financial principles to household decision making, stressing integration between areas. Income tax and estate planning, retirement, investments, portfolio management, and risk management.

430. Introduction to International Business.

(3:3:0) Prerequisite: PMgt 385 for business majors.

Complexities confronting U.S. firms and their management in international environments. Emphasizes functional and planning areas, including organization, market research, financial analysis.

431. International Marketing. (3:3:0)

Prerequisite: BusM 341, 430.

International market entry strategies, export marketing, joint ventures, and other market entry modes. Regional/National markets; cultural, political, legal environments. Negotiations, trade financing, marketing mix.

432. International Corporate Finance. (3:3:0)

Prerequisite: BusM 301, 430.

Financial aspects of multinational corporations operating within an international environment; direct foreign investment, foreign exchange regulations, capital markets, etc.

442. Marketing Research. (3:3:0)

Prerequisite: BusM 341.

Concepts and methodology for conducting marketing research. Emphasis on solving problems faced by the marketing manager. Consulting research project required.

444. Consumer Behavior. (3:3:0) Prerequisite:

BusM 341.

Mental and emotional processes and physical actions that people engage in when selecting, purchasing, using, and discarding products and services to satisfy consumer needs and desires.

450. Industrial Marketing and Procurement.

(3:3:0) Prerequisite: BusM 341.

Buying strategies, market opportunities, product strategies, channel system relations, and pricing of industrial products and services. Intensive negotiations experience gained in class.

454. Professional Selling and Sales

Management. (3:3:0) Prerequisite: BusM 341.

Concepts of professional selling and sales management including personal selling skills; strategic role of personal selling; organizing, directing, controlling, and evaluating the sales force.

455. Promotion Management (3:3:0)

Prerequisite: BusM 341.

Strategies in promoting business and nonbusiness products, services, and institutions, including the role of promotion, target selection, media and copy decisions, and marketing research.

456. Retailing Management. (3:3:0)

Prerequisite: BusM 341 (340 for nonmajors).

Selection, location, and management of retail stores and systems, emphasizing profitability and integration of accounting, finance, and economic concepts and tools.

458R. Seminar in Marketing Management.

(3:3:0 ea.) Prerequisite: BusM 341.

Selected marketing issues, quantitative techniques and forecasting, advertising management, and industrial management.

459. Marketing Strategy. (3:3:0) Prerequisite:

BusM 301, 341, 442.

Integration of finance, marketing, and case studies in economic concepts and techniques in marketing decision making and planning.

461. Advanced Operations Analysis. (3:3:0)

Prerequisite: BusM 361.

Operations research and management science techniques as a managerial aid to decision making under certainty and uncertainty.

463. Advanced Operations Management.

(3:3:0) Prerequisite: BusM 361.

Cases, reading, research, and reports on current industrial practices and problems.

465. Contemporary Issues in Production and Inventory Management. (3:3:0)

Prerequisite: BusM 361.

Information flow, required feedback, and control associated with managing productive capacity. Developing proper inventory and productive capacities in manufacturing and nonmanufacturing environments.

468R. Selected Topics in Operations and Systems Analysis. (3:3:0 ea.) Prerequisite:

BusM 361, 461.

482. New Enterprise Management. (3:3:0)

Prerequisite: BusM 301, 341, 361, OrgB 321.

Concepts and skills of entrepreneurship. Application of functional tools to case situations.

483. Entrepreneurship. (3:3:0)

General topics in entrepreneurship.

490R. Topics in Business Management.

(3:3:0 ea.) Prerequisite: completion of business fundamentals and College of Business core courses.

499. Business Policy. (3:3:0) Prerequisite:

BusM 301, 341, 361, OrgB 421. Required last semester before graduation.

Determining long-range objectives in the business firm and developing sound and consistent strategic policies to achieve these objectives.

Advanced Undergraduate or Graduate Course

599R. Cooperative Education: Retailing

Internship. (1–3:Arr.:Arr. ea.) Prerequisite: BusM 340 or 341, 256 or 456, plus department core requirements and approval from director of the Skaggs Institute of Retail Management.

Skaggs Institute of Retail Management

Heikki Rinne, Director (480 TNRB)

The Skaggs Institute of Retail Management offers a retailing emphasis through the Institute of Business Management. It also sponsors the Fred G. Meyer Chair of Retailing, established to enhance understanding and advancement of the industry and to promote successful business principles. Goals of the institute include:

1. Increase the quantity and quality of young people entering the retail field, reduce the time required for a new trainee to become an effective part of the management team, and reduce the

- turnover rate among management trainees.
2. Produce research that meets the demands of technological and management progress in retailing.
 3. Produce workshops and seminars on and off campus to assist in meeting the needs of retail management and increasing the students' understanding of current management problems as well as long-range social issues.

The Skaggs Institute of Retail Management places a large number of students in internship programs in leading retail companies across the United States. Internships, scholarships, and assistantships are available to students in eight different majors.

Master of Business Administration

The Master of Business Administration Program is a two-year program designed to prepare the graduate student for a career in business.

Currently the program presents a new and exciting approach to teaching business management. Courses are integrated across disciplines in order to use faculty expertise from different points of view. Also, concept days are alternated with case study days to improve practical application.

During the first year concepts are taught in the following subjects: finance, marketing, operations, organizational behavior, communications, accounting, managerial economics, and management strategy.

During the second year elective courses are selected that emphasize the student's interests.

Increasingly, international focus and entrepreneurship are encouraged to better prepare the student for the world of business.

Programs and Degrees

MBA Master of Business Administration
Emphasis:
Executive Master of Business
Administration Program

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Courses for Master of Business Administration (MBA)

See also the 1993-94 BYU Graduate Studies Catalog.

97R. Computer Skills for Managers.
(0:0:0)

500. Corporate Financial Reporting.
(2.5:2.5:0)

510. Managerial Economics. (2.5:2.5:0)

511. Macroeconomics and Business Environment. (2:2:0)

520. Business Finance 1. (2.5:2.5:0)

530. Statistical Analysis. (2.5:2.5:0)

533. Operations Management 1. (2:2:0)

534. Operations Management 2. (1.5:1.5:0)

540. Organizational Behavior. (2.5:2.5:0)

550. Marketing Management 1. (2:2:0)

560. Integrative Exercise. (1:1:0)

561. Written and Oral Communication 1.
(2:2:0)

562. Written and Oral Communication 2.
(1.5:1.5:0)

580. Introduction to Strategy. (2:2:0)

585. Management and Technology. (2.5:2.5:0)

586. (MBA-ISys 548) Data Communications.
(3:3:0)

591. Business, Government, and International Economy. (3:3:0)

593R. Management Seminar. (1-3:Arr.:Arr.
ea.)

601. Managerial Accounting 2. (3:3:0)

602. Federal Income Taxation. (3:3:0)

603. (MBA-ISys 643) Advanced Information Systems Analysis. (3:3:0)

604. (MBA-ISys 644) Advanced Information Systems Design. (3:3:0)

605. (MBA-ISys 645) Advanced Database Analysis and Design. (3:3:0)

606. Seminar in Current Accounting Problems. (3:3:0)

607. (MBA-Acc 657) Management Consulting and Projects. (3:3:0)

608. (MBA-ISys 646) Advanced Fourth-Generation Programming Languages. (3:3:0)

610. (MBA-ManEc) Consulting Applications of Economic Analysis. (3:3:0)

611. National and International Business Environment. (3:3:0)

613. Business and Economic Forecasting: Theory and Applications. (3:3:0)

614. (MBA-ManEc) Market Analysis and Decision Making. (3:3:0)

615R. Seminar in Managerial Economics. (3:3:0 ea.)

618. Personal Financial Planning. (3:3:0)

620. Corporate Financial Strategy. (3:3:0)

621. Advanced Corporate Finance. (3:3:0)

622. Investments. (3:3:0)

623. Investment Theory and Evidence. (3:3:0)

624. Capital and Security Markets. (3:3:0)

625. Management of Financial Institutions. (3:3:0)

626. Short-Term Financial Management. (3:3:0)

627. International Finance. (3:3:0)

628. Futures and Options Markets. (3:3:0)

629. Silver Fund. (3:3:0)

630. Managers' Quantitative Tool Kit 1. (3:3:0)

631. Advanced Data Analysis. (3:3:0)

632. Managers' Quantitative Tool Kit 2. (3:3:0)

634. Advanced Operations Management. (3:3:0)

635. Systems Analysis and Design. (3:3:0)

636. Operations Management Seminar. (3:3:0)

637. International Management and Production Techniques. (3:3:0)

638. Strategic Issues in Manufacturing. (3:3:0)

643. Management Philosophy and Style. (3:3:0)

644. Advanced Personnel Administration. (3:3:0)

645. Managing Organization Cultures. (3:3:0)

646. Organizational Theory. (3:3:0)

647. Advanced Seminar in Organizational Behavior. (3:3:0)

648. The Dynamics of Organization Change: Interventions and Strategies. (3:3:0)

650. Marketing Research and Information Systems. (3:3:0)

651. Buyer Behavior and Marketing Decisions. (3:3:0)

652. Quantitative Methods and Market Analysis. (3:3:0)

653. Seminar in Marketing. (3:3:0)

654. Sales Management. (3:3:0)

655. Retailing Management. (3:3:0)

656. Business Negotiating. (3:3:0)

657. Product Management. (3:3:0)

658. International Marketing. (3:3:0)

659. Business-to-Business Marketing. (3:3:0)

660. Strategic Marketing and Planning. (3:3:0)

680. Business Policy. (3:3:0)

682. Ethics, Business, and Society. (3:3:0)

683. **New Enterprise Management.** (3:3:0)
 684. **Global Management 1.** (3:3:0)
 685. **Global Management 2.** (3:3:0)
 686. **Real Estate Management.** (3:3:0)
 687. **Risk Management.** (3:3:0)
 688. **Applied Econometrics.** (3:3:0)
 689. **Business Law.** (3:3:0)
 690R. **Management Field Study.** (3:3:0)
 692. **Business in History.** (3:3:0)
 693R. **Readings and Conference.** (1–3:3:0 ea.)

Engineering/Technology Management Degree Programs

See the BYU Marriott School of Management Graduate Catalog and the College of Engineering and Technology Advisement Center.

Courses for Master of Engineering Management and Master of Technology Management (Mgt)

See the BYU Marriott School of Management Graduate Catalog for descriptions.

501. **Managerial Accounting.** (3:3:0)
 511. **Managerial Finance.** (3:3:0)
 541. **Marketing Management.** (3:3:0)
 551. **Organizational Behavior.** (3:3:0)
 561. **Operations Management.** (3:3:0)
 562. **Project Management.** (3:3:0)
 565. **Written and Oral Communication.** (2:2:0)
 580. **Business Policy.** (3:3:0)

Management Communication

Paul R. Timm, Chair (590 TNRB)

Professors

- Baker, William H. (1970) BS, Southern Utah U., 1969; MS, Brigham Young U., 1970; EdD, Oklahoma State U., 1974.
 Bell, R. DerMont (1957) BS, MS, Brigham Young U., 1955, 1956; PhD, U. of Southern California, 1960.
 Perry, Devern J. (1963) BS, MS, Brigham Young U., 1958, 1962; EdD, U. of North Dakota, 1968.

- Stoddard, Ted D. (1969) BS, MS, Brigham Young U., 1962, 1963; EdD, Arizona State U., 1967.
 Timm, Paul Roy (1979) BA, State U. of New York, 1968; MA, Ohio U., 1969; PhD, Florida State U., 1977.
 Waters, Max L. (1958) BA, MEd, Brigham Young U., 1958, 1960; EdD, Colorado State Coll., 1963.

Associate Professor

- Hartman, Larry D. (1984) BA, MS, Brigham Young U., 1962, 1963; EdD, Oklahoma State U., 1973.

Associate Lecturer

- Hanson, Garth A. (1982) BS, MS, Utah State U., 1963, 1965; PhD, U. of Nebraska, 1973.

Assistant Professors

- Detienne, Kristen B. (1991) BA, California State U., 1987; MA, PhD, U. of Southern California, 1990, 1991.
 Hanson, Kaye T. (1989) BA, MA, PhD, Brigham Young U., 1964, 1967, 1983.
 Howard, Janet M. (1969) BS, MS, Northwestern State U., 1965, 1968; EdD, Brigham Young U., 1985.
 Thompson, Michael P. (1988) BA, Brigham Young U., 1975; MS, PhD, Rensselaer Polytechnic Inst., 1978, 1985.

Emeriti

- Ashby, Nadine T. (1960) BA, Brigham Young U., 1936; MA, Colorado State Coll., 1959; PhD, U. of North Dakota, 1971.
 Nelson, George Edward (1968) BS, MS, U. of Utah, 1965, 1966; EdD, Arizona State U., 1968.
 Petersen, Betty J. (1963) BS, Utah State U., 1958; MA, EdD, Columbia U., 1960, 1971.
 Polson, J. Perry (1952) BA, MS, U. of Utah, 1947, 1952; EdD, U. of Southern California, 1961.

Management Communication

Undergraduate Courses

320. **Written Business Communication.** (3:3:1) Independent Study also. Prerequisite: Engl 115. To be taken before senior year. Not for freshmen.

Includes case analysis and problem solving. Fulfills Advanced Writing requirement for General Education.

321. **Oral Business Communication.** (1:1:2) Prerequisite: acceptance into the Marriott School of Management.

Theory and practice, including experience in instructional, sales, and persuasive business presentations. Presentations will be videotaped.

- 490R. **Special Topics in Management Communication.** (1–3:Arr.:Arr. ea.)

Prerequisite: MCom 320, 321.

Special subjects as announced before each semester.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

641. **Communication for Professional Accounting 1.** (1.5:Arr.:0)

642. **Communication for Professional Accounting 2.** (1:Arr.:Arr.)

Managerial Economics

Dwight M. Blood, Chair (610-A TNRB)

Professors

- Barnes, Howard W. (1964) AB, Harvard Coll., 1955; MBA, U. of Southern California, 1963; Dr. rer. pol., Technische Universität Braunschweig, Federal Republic of Germany, 1968.
 Blood, Dwight M. (1980) BS, U. of Wyoming, 1953; MS, Montana State U., 1955; MA, PhD, U. of Michigan, 1958, 1963.
 Bryson, Phillip J. (1983) BA, U. of Utah, 1964; PhD, Ohio State U., 1967.
 Clarke, Darral G. (1985) BS, U. of Utah, 1965; MS, Ohio State U., 1967; PhD, Purdue U., 1972.
 McDonald, James B. (1972) BS, MS, Utah State U., 1964, 1967; PhD, Purdue U., 1970.
 Pritchett, B. Michael (1969) BS, Brigham Young U., 1965; MS, PhD, Purdue U., 1967, 1970.

Associate Professors

- Crawford, Robert G. (1972) BA, Brigham Young U., 1967; MS, PhD, Carnegie-Mellon U., 1971, 1975.
 Koller, Roland H., II (1969) BS, U. of Utah, 1962; MA, PhD, U. of Wisconsin, Madison, 1968, 1969.
 Nelson, Ray D. (1985) BA, Brigham Young U., 1975; MA, PhD, U. of California, Berkeley, 1979, 1981.
 Rickenbach, J. Dean (1957) BS, Brigham Young U., 1954; MS, Stanford U., 1957; PhD, Indiana U., Bloomington, 1963.

Adjunct Professor

- Oveson, Richard M. (1976) BA, Brigham Young U., 1955; MPA, PhD, Harvard U., 1965, 1969.

Emeritus

- Davies, J. Kenneth (1953) BS, Marquette U., 1945; MS, Brigham Young U., 1950; PhD, U. of Southern California, 1960.

Programs and Degrees

The primary role of the Department of Managerial Economics is to provide economics training for both undergraduate and graduate students enrolled in the Marriott School of Management. Although there is no undergraduate degree available in the Department of Managerial Economics, undergraduate courses in

managerial economics are available to those interested in applying economics and quantitative analysis to the solution of management problems.

Managerial Economics Emphasis

The emphasis in managerial economics is helpful to those students who have career interests involving economic forecasting, computer applications of managerial modeling, and quantitative analysis of management problems.

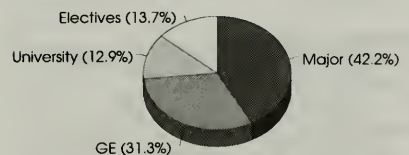
Core Requirements for Managerial Economics Emphasis

See the J. Willard and Alice S. Marriott School of Management in the Colleges section of this catalog for courses required before taking upper-division managerial economics courses.

Program Requirements

Required for an emphasis in managerial economics in addition to core requirements: ManEc 487 and two of 452, 453, 458, 475, 476, 486, 489, and one of any upper-division MSM courses.

Summary of Degree Requirements for Management—Managerial Economics Emphasis



1. Total hours	128.0
2. Major hours*	54.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	17.5
6. 40 hours upper-division GPA requirement of 2.25	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Graduate Program

MS Managerial Economics

See the 1993–94 BYU Graduate Studies Catalog.

Managerial Economics (ManEc)

Undergraduate Courses

300. Economics of Market Systems. (3:3:0) Independent Study also. Prerequisite: Econ 110.

Models of decision making, business strategy, and price formation in the contemporary market system.

301. Macroeconomics for Business Decisions. (3:3:0) Independent Study also. Prerequisite: Econ 110, ManEc 300.

Models of aggregate economic fluctuations, economic growth, inflation, and interest rates.

452. Real Estate and Urban Analysis. (3:3:0) Prerequisite: ManEc 300, 301, or equivalent.

Economic analysis of real estate valuation, finance, investment, development, and housing.

453. Money, Banking, and Business. (3:3:0) Prerequisite: ManEc 300, 301, or equivalent.

Economic analysis of effects of money, banking, and financial institutions on business decisions and aggregate economic activity.

458. International Economic Analysis. (3:3:0) Prerequisite: ManEc 300, 301, or equivalent.

Exchange rate fluctuations, balance of payments, and international competitive advantage.

475. Public Finance. (3:3:0) Prerequisite: ManEc 300, 301, or equivalent.

Analysis of interaction of governments and institutions of a market economy. Tax and revenue policy, evaluation of expenditure policy, and impact of public decisions on businesses and individuals.

476. Government and Business. (3:3:0) Prerequisite: ManEc 300, 301, or equivalent.

Role of government in the market system, emphasizing antitrust and regulation.

486. Mathematical Economics for Decision Making. (3:3:0) Prerequisite: Math 112, 199R or equivalent, ManEc 300; 301 or concurrent registration or equivalent.

Linear algebra and calculus applied to production analysis, consumer choice, market equilibrium, and national income models.

487. Applied Quantitative Analysis. (3:3:0) Prerequisite: Stat 222 or 321, calculus, ManEc 300; 301 or concurrent registration or equivalent.

Introduction to econometrics and other quantitative methods. Emphasis on applying the models.

489. Managerial Economic Modeling. (3:3:0) Prerequisite: ManEc 300, 301, Stat 222, or equivalent.

Applying economic simulation models to management decisions and forecasting.

Advanced Undergraduate or Graduate Courses

552. Urban Analysis. (3:3:0) Prerequisite: ManEc 300, and 301, or equivalent.

Applying economic theory to urban problems and policies.

576. Topics in Government and Business. (3:3:0) Prerequisite: ManEc 300, 301, or instructor's consent.

Analysis of either antitrust or public regulation of business (varies with semester).

589R. Mathematical Theory of Managerial Economics. (3:3:0 ea.) Prerequisite: ManEc 300, 301, 486, or instructor's consent.

Mathematics of optimization as applied to economic decisions.

594R. Seminars in Selected Managerial Economics Topics. (1–6:0:0 ea.) Prerequisite: instructor's consent.

Seminars covering a variety of topics in economic policy and theory.

595R. Lectures in Managerial Economics. (1–3:Arr.:0 ea.) Prerequisite: instructor's consent.

596R. Readings in Managerial Economics. (1–3:Arr.:0 ea.) Prerequisite: instructor's consent.

597R. Research in Managerial Economics. (1–3:Arr.:0 ea.) Prerequisite: instructor's consent.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

610. (ManEc-MBA) Consulting Applications of Economic Analysis. (3:3:0)

611. National and International Business Environment. (3:3:0)

613. Business and Economic Forecasting; Theory and Applications. (3:3:0)

614. (ManEc-MBA) Market Analysis and Decision Making. (3:3:0)

615R. Seminar in Managerial Economics. (3:3:0 ea.)

688. Applied Econometrics. (3:3:0)

689. Advanced Econometric Techniques. (3:3:0)

699R. Master's Thesis. (1-6:Arr.:0 ea.)

Institute of Public Management

N. Dale Wright, Director (760 TNRB)

Professors

Cornia, Gary C., Associate Dean (1980) BS, Weber State Coll., 1972; MS, Utah State U., 1974; PhD, Ohio State U., 1979.

Hart, David Kirkwood (1983) BS, Brigham Young U., 1957; MA, U. of California, Berkeley, 1960; PhD, Claremont Graduate School, 1965.

Knighton, Lennis M. (1971) AS, Stevens Henager Coll., 1956; BA, MAcc, Brigham Young U., 1962, 1964; CPA, 1964; PhD, Michigan State U., 1966.

Parsons, Robert J. (1970) BS, MS, Brigham Young U., 1964, 1966; PhD, U. of California, Riverside, 1971.

Snow, Karl N., Jr., (1962) BS, Brigham Young U., 1956; MA, U. of Minnesota, Minneapolis, 1958; MPA, DPA, U. of Southern California, 1965, 1972.

Wright, N. Dale (1968) BA, MS, Brigham Young U., 1964, 1966; PhD, U. of Southern California, 1972.

Associate Professors

Buckwalter, Doyle W. (1968) BA, MA, Brigham Young U., 1963, 1964; PhD, U. of Michigan, 1968.

Walters, Lawrence C. (1985) BA, Brigham Young U., 1981; PhD, U. of Pennsylvania, 1986.

Wheatly, Margaret (1989) BS, U. of Rochester, 1966; MS, New York U., 1973; EdD, Harvard U., 1979.

Wheeler, Gloria E. (1978) BS, Montana State U., 1965; MA, MS, PhD, U. of Michigan, 1966, 1968, 1972.

Assistant Professor

Woller, Gary M. (1991) BA, MBA, Brigham Young U., 1984, 1986; MA, PhD, U. of Rochester, 1989, 1992.

Emeriti

Brower, Stephen L. (1974) BS, MS, Utah State U., 1949, 1950; PhD, Cornell U., 1961.

Harlow, Leroy F. (1967) BS, Iowa State U. of Science and Technology, 1938; MA, U. of Minnesota, Minneapolis, 1943.

Programs and Degrees

MPA Public Administration

Graduate Programs

See the BYU Marriott School of Management Graduate Catalog.

Public Management (PMgt)

Undergraduate Courses

385. Business and Society. (3:3:0)

Interaction between business and other societal institutions, both domestic and international.

386. Business Ethics. (3:3:0)

Ethical premises that underlie and justify free enterprise and their application in everyday business affairs.

Graduate Degree Courses

See the BYU Marriott School of Management Graduate Catalog for descriptions.

603. Managerial Accounting. (1-3:3:0)

604. Management Cost Analysis. (1-3:3:0)

607. Program Auditing and Evaluation. (3:3:0)

610. Managerial Economics. (3:3:0)

619R. Seminar in Economic Analysis. (1-3:3:0 ea.)

622. Financing Public Services. (3:3:0)

623. Budgeting. (1-3:3:0)

625. Debt Management. (3:3:0)

626. Tax Policy and Management. (3:3:0)

627. Cash Management and the Investment of Funds. (2:2:0)

629R. Seminar in Financial Management. (1-3:3:0 ea.)

630. Quantitative Analysis. (3:3:0)

634. Computer Concepts for Management. (1-3:3:0)

635. Systems Analysis and Design. (3:3:0)

638. Research Methods. (3:3:0)

640. Personnel Management and Labor Relations. (3:3:0)

641. Management and Organization Development. (3:3:0)

642R. Management Development Seminar. (0-3:3:0 ea.)

643. Management Philosophy and Style. (3:3:0)

645. Collective Bargaining. (3:3:0)

646. Labor Contract Management. (3:3:0)

647. Personnel Planning. (3:3:0)

648. Equal Employment Opportunity and Affirmative Action. (2:2:0)

649R. Personnel Administration and Organization Behavior Seminar. (1-3:3:0 ea.)

659R. Seminar in International Management. (1-3:3:0 ea.)

660. Written Communications. (1-2:2:0)

661. Oral Communications. (1:1:0)

675. Urban Management. (3:3:0)

676. Urban and Regional Planning. (3:3:0)

677. Public Works Management. (3:3:0)

678. Intergovernmental Administrative Relations. (1-3:3:0)

679R. Seminar in Local Government Administration. (1-3:3:0 ea.)

681. Legal Concepts for Managers. (2:2:0)

682. Ethics for Management. (3:3:0)

684. Public Institutions, Structures, and Processes. (3:3:0)

685. Management Strategy and Organization Policy. (3:3:0)

688. Business and Government Relations. (3:3:0)

689. Public Policy Analysis. (3:3:0)

691R. Readings and Conferences. (1-3:3:0 ea.)

692R. Directed Research. (1-3:3:0 ea.)

693R. Practicum. (1-4:0:0 ea.)

Organizational Behavior

Alan L. Wilkins, Chair (790 TNRB)

Professors

Cherrington, David J. (1973) BS, Brigham Young U., 1966; MBA, DBA, Indiana U., Bloomington, 1970, 1970.

Mills, Gordon E. (1971) BA, MA, Brigham Young U., 1966, 1967; PhD, Pennsylvania State U., 1970.

Pace, R. Wayne (1978) BS, U. of Utah, 1953; MS, Brigham Young U., 1957; PhD, Purdue U., 1960.

Peterson, Brent D. (1972) BA, MA, Brigham Young U., 1967, 1968; PhD, Ohio U., 1970.

Ritchie, J. Bonner (1973) BS, PhD, U. of California, Berkeley, 1960, 1968.

Stephan, Eric G. (1968) BS, PhD, U. of Utah, 1961, 1966.

Wilkins, Alan L. (1978) BA, MBA, Brigham Young U., 1972, 1974; PhD, Stanford U., 1979.

Woodworth, Warner P. (1976) BS, MS, Brigham Young U., 1967, 1969; PhD, U. of Michigan, 1974.

Associate Professors

Dyer, W. Gibb, Jr. (1984) BS, MBA, Brigham Young U., 1977, 1979; PhD, Massachusetts Inst. of Technology, 1984.

Kirkham, Kate L. (1978) BS, U. of Utah, 1966; MA, George Washington U., 1973; PhD, Union Graduate School, 1977.

Meek, Christopher B. (1984) BS, MOB, Brigham Young U., 1973, 1975; PhD, Cornell U., 1983.

Perry, Lee T. (1985) BS, MOB, Brigham Young U., 1974, 1977; PhD, Yale U., 1982.

Assistant Professor

Gregersen, Hal B. (1992) BA, U. of Utah, 1981; MOB, Brigham Young U., 1983; PhD, U. of California, Irvine, 1989.

Emeriti

Covey, Stephen R. (1957) BS, U. of Utah, 1953; MBA, Harvard U., 1957; DRE, Brigham Young U., 1976.

Dalton, Gene W. (1972) BS, U. of Utah, 1952; MS, Brigham Young U., 1956; DBA, Harvard U., 1962.

Dyer, William G. (1955) BA, MA, Brigham Young U., 1950, 1952; PhD, U. of Wisconsin, Madison, 1955.

Moffitt, J. Weldon (1953) BS, Brigham Young U., 1949; MS, U. of Utah, 1950; PhD, U. of Illinois, 1953.

Programs and Degrees

The Department of Organizational Behavior has as a major graduate objective the training of individuals who will be analyzing, managing, and changing organizations and whose concern is building systems that will better meet the needs of people and accomplish organizational goals. Professional development in this field centers on understanding the nature of organizations as systems, the management process, organization change and development, effective behavior in organizations, and the role of the organizational change agent.

Organizational Behavior Emphasis

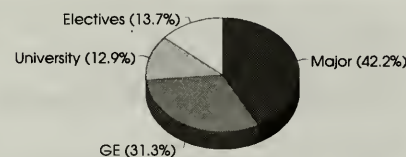
Undergraduates with an emphasis in organizational behavior are prepared for entry-level jobs in human resource or personnel departments.

Emphasis Requirements

See the J. Willard and Alice S. Marriott School of Management (MSM) in the Colleges section of this catalog for courses required before taking upper-division organizational behavior courses.

Required in addition to core requirements: OrgB 490R; two of 327, 333, 347, plus one upper-division MSM course (must be 3.0 hours).

Summary of Degree Requirements for Management—Organizational Behavior Emphasis



1. Total hours	128.0
2. Major hours ♦	54.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	17.5
6. 40 hours upper-division GPA requirement of 2.25	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Graduate Program

MOB Master of Organizational Behavior

See the BYU Marriott School of Management Graduate Catalog.

Organizational Behavior (OrgB)

Undergraduate Courses

320. Fundamentals of Organizational Behavior. (3:2:2)

Organizational behavior at three levels: individual, group, and organizational. Motivation, communication, rewards, leadership, conflict, decision making, organizational structure, performance evaluation, and organizational change.

321. Fundamentals of Organizational Behavior. (3:2:2) Independent Study also. For MSM majors only.

Organizational behavior at three levels: individual, group, and organizational. Motivation, communication, rewards, leadership, conflict, decision making, organizational structure, performance evaluation, and organizational change.

327. Personnel and Human Resource Administration. (3:3:0) Prerequisite: OrgB 320 or 321.

Functions of personnel administration; employee selection, wage and salary administration, training and development, employee relations, and human resource planning.

333. Human Resource Development. (3:3:0) Prerequisite: OrgB 320 or 321.

Competencies and knowledge fundamental to management, employee, and organization development; history, opportunities, programs, preparation, and place of HRD in organizations.

347. Managerial Leadership Development. (3:3:0) Independent Study also. Prerequisite: OrgB 320 or 321.

Principles and practices of successful leadership: decision making, communications, planning, team building, motivation, and interpersonal skills.

367R. Democratic Management. (1-2:Arr.:0 ea.)

Combination of theory and practice of participative decision making in manufacturing enterprises.

490R. Professional Development Seminar. (3:3:0 ea.) Prerequisite: OrgB 320 or 321.

Special topics in organizational behavior. Course content varies from year to year.

Advanced Undergraduate or Graduate Courses

531. Managing Entrepreneurial Firms and Family Businesses. (3:3:0)

551. Theory and Practice of Third-World Development. (3:3:0)

561. Labor Relations. (3:3:0)

Graduate Degree Courses

See the BYU Marriott School of Management Graduate Catalog for descriptions.

601. Introduction to Organizational Paradigms. (3:3:0)

602. Organizational Behavior Theory for Diagnosis. (3:3:0)

603. Research Design and Data Analysis. (3:3:0)

604. Dynamics of Organizational Change: Interventions and Strategies. (3:3:0)

605. Human Resource Management. (3:3:0)

610. Management Philosophy and Style. (3:3:0)

614. Organizational Communication. (3:3:0)

616. Industrial Democracy. (3:3:0)

630. Dynamics of Interpersonal Behavior. (3:3:0)

635. Diagnosing Human Resources and Communication Systems. (3:3:0)

636. Diversity and Discrimination in Organizations. (3:3:0)

637. Improving Human Resources and Communication Systems. (3:3:0)

645. Managing Organization Cultures. (3:3:0)

657. Design, Media, and Computers in Human Resource Development. (3:3:0)

660R. Advanced Seminar in Organizational Behavior. (1-3:3:0 ea.)

669R. Readings in Organizational Behavior. (1-6:0:0 ea.)

672. The Consultative Process. (3:3:0)

679R. Practicum in Organizational Development. (1-6:0:0 ea.)

680. Organizational Behavior Research Report. (3:3:0)

School of Accountancy and Information Systems

W. Steve Albrecht, Director (540 TNRB)

Kevin D. Stocks, Associate Director (560 TNRB)

Professors

Albrecht, Wm. Steve (1977) BS, Brigham Young U., 1971; MBA, PhD, U. of Wisconsin, 1973, 1975.

Cameron, James B. (1969) BS, U. of Utah, 1956; MBA, U. of California, Los Angeles, 1958; CPA, 1960; PhD, Montana State U., 1967.

Cherrington, Jay Owen (1978) BS, Brigham Young U., 1968; MBA, PhD, U. of Minnesota, Minneapolis, 1971, 1972.

Gardner, Robert L. (1978) BA, Brigham Young U., 1969; MBA, BS, U. of Utah, 1975, 1976; PhD, U. of Texas, Austin, 1979.

Garrison, Ray H. (1966) BS, MS, Brigham Young U., 1960, 1961; CPA, 1962; DBA, Indiana U., Bloomington, 1966.

Hansen, James V. (1982) BS, MS, Brigham Young U., 1963, 1966; PhD, U. of Washington, Seattle, 1973.

Hardy, John W. (1969) BS, Brigham Young U., 1964; MBA, Indiana U., 1966; PhD, U. of Texas, Austin, 1972; CPA

McKell, Lynn J. (1974) BS, Brigham Young U., 1968; MSEE, MS, MS, PhD, Purdue U., 1970, 1972, 1973, 1973.

Radebaugh, Lee Howard, Associate Dean, (1980) BS, Brigham Young U., 1968; MBA, DBA, Indiana U., Bloomington, 1973.

Randall, Boyd C. (1974) BS, JD, MBA, U. of Utah, 1965, 1967, 1968; PhD, U. of Minnesota, 1972.

Romney, Marshall B. (1977) BS, MAcc, Brigham Young U., 1971, 1972; PhD, U. of Texas, Austin, 1977.

Skousen, K. Fred, Dean (1970) BS, Brigham Young U., 1965; MAS., PhD, U. of Illinois, 1966, 1968; CPA, 1968.

Smith, Harold T. (1963) BA, MA, Colorado State Coll., 1958, 1959; EdD, Brigham Young U., 1967.

Smith, Jay M. (1971) BS, MS, Brigham Young U., 1953, 1960; PhD, Stanford U., 1965; CPA, 1958.

Stewart, Dave Nelson (1980) BA, MAcc, Brigham Young U., 1977, 1977; PhD, U. of Florida, 1980.

Streuling, G. Fred, Director (1976) BA, MAcc, Brigham Young U., 1963, 1964; PhD, U. of Iowa, 1971; CPA, Utah, 1965; CPA, California, 1966.

Woodfield, Leon W. (1960) BS, MBA, U. of Utah, 1956, 1957, CPA, CPA, 1959, 1960; DBA, Michigan State U., 1965.

Associate Professors

Boyer, Glen L. (1967) BS, Utah State U., 1963; MS, PhD, U. of North Dakota, 1966, 1972.

Dalebout, Richard S. (1975) BA, Brigham Young U., 1968; SJD, U. of Utah, 1971.

Hansen, Gary W. (1983) BS, MS, Brigham Young U., 1967, 1968; PhD, Indiana U., 1974.

Howe, Keith R. (1979) BS, MBA, U. of Utah, 1972, 1976; DBA, Arizona State U., 1979.

McAllister, LeRay L. (1963) BA, Brigham Young U., 1957; MS, DBA, Arizona State U., 1960, 1971; CPA, 1962.

Meservy, Raymond D. (1989) BS, MAcc, Brigham Young U., 1977, 1977; PhD, U. of Minnesota, 1985.

Sonderegger, Emory O. (1960) BS, MS, Brigham Young U., 1956, 1957; CPA, 1963.

Stocks, Kevin D. (1983) BS, MAcc, Brigham Young U., 1978, 1978; PhD, Oklahoma State U., 1981; CPA, 1980.

Associate Lecturer

De Lassen, Jan (1981) BS, Texas A&M U., 1959.

Assistant Professors

Cottrell, David M. (1992) BS, MAcc, MHA, Brigham Young U., 1984, 1985; PhD, Ohio State U., 1992.

Denna, Eric L. (1988) BS, MAcc, Brigham Young U., 1984, 1984; PhD, Michigan State U., 1989.

Palmer, Glen O. (1964) BS, MAcc, Brigham Young U., 1961, 1963; CPA, 1963.

Peterson, Fredric G. (1973) BA, MA, PhD, U. of Utah, 1964, 1966, 1973.

Stice, James D. (1988) BS, MAcc, Brigham Young U., 1984, 1984; PhD, U. of Washington, 1988.

Swain, Monte R. (1991) BS, MAcc, Brigham Young U., 1987, 1987; PhD, Michigan State U., 1991.

Instructor

Jackson, Robert B. (1988) BS, MS, MBA, Brigham Young U., 1968, 1970, 1972.

Prawitt, Douglas F. (1993) BS, MAcc, Brigham Young U., 1988.

Emeriti

Bentley, Joseph T. (1953) BS, MS, Brigham Young U., 1928, 1954; CPA, 1946.

Carlson, Gary (1986) BS, MS, PhD, U. of California, Los Angeles, 1956, 1958, 1962.

Hubbard, Ernest Dee (1959) BS, Utah State U., 1952; MBA, U. of Utah, 1959; PhD, U. of Washington, 1967.

Johnson, Eldred A. (1955) BA, MA, Brigham Young U., 1949, 1950, CPA, 1952; PhD, U. of Utah, 1968.

Orton, Bryce B. (1961) BS, Brigham Young U., 1951; MBA, U. of Oregon, 1957; PhD, U. of Washington, 1962.

Skousen, Karl M. (1958) BS, MS, Brigham Young U., 1944, 1957; CPA, 1957; PhD, Michigan State U., 1962.

Smith, Robert J. (1949) BS, Brigham Young U., 1948; MBA, Northwestern U., 1949; CPA, Illinois, 1949; CPA, Utah, 1950; DBA, Indiana U., 1957.

Taylor, Dale H. (1963) BA, MA, Brigham Young U., 1951, 1953; CPA, 1955; PhD, Northwestern U., 1963.

White, J. Morgan (1967) BS, Brigham Young U., 1951; CPA, 1953; MS, Brigham Young U., 1958.

Programs and Degrees

BS	Accounting
MAcc	Master of Accountancy
Emphases:	
	Accounting Information Systems
	Professional Accounting
	Taxation

The SOAIS Program is primarily a three-academic-year professional program leading to the MAcc degree, usually with the concurrent awarding of the BS in accounting. Students may also pursue a separate BS degree in accounting. A bachelor's emphasis in information systems is offered as part of the management degree.

Graduate Programs

See the BYU Marriott School of Management Graduate Catalog.

Program Requirements

I. See J. Willard and Alice S. Marriott School of Management, Undergraduate Programs, in the Colleges section of this catalog for information on Marriott School of Management (MSM) requirements and procedures for admission to the MSM.

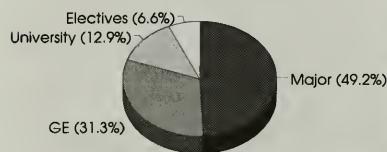
II. The following requirements apply to the BS degree in accounting:

- Premanagement Core: Math 119 or equivalent (4), Econ 110 (3), Stat 222 (4), Acc 201 (3), computer proficiency exam; meet requirements; apply and be accepted into the Marriott School of Management.
- Preaccounting Core: Acc 202 (3), 341 (2), MCom 320 (3); meet requirements; apply and be accepted into accounting major.

- C. Accounting Core 1: ManEc 300 (3), 301 (3), PMgt 385 (3), BusM 101-104 (2).
- D. Accounting Core 2: MCom 321 (1), OrgB 321 (3), BusM 341 (3), 361 (Acc 432) (3), 402 (3), 499* (3).
- E. Accounting Major: Acc 401 (6), 402 (6), 403 (6), 404 (6).

*To be taken during final semester.

Summary of Degree Requirements for BS Accounting



1. Total hours	128.0
2. Major hours*	63.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	8.5
6. 40 hours upper-division GPA requirement of 2.9	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Program Acceptance Requirements

Acceptance into the SOAIS is limited to fall semester only, with three application deadlines: October 30, February 28, and June 30. Application forms and further information are available at the MSM Advisement Center (460 TNRB). Acceptance is competitive, with a maximum of 240 students admitted each year. Not all students who meet minimum admission requirements are guaranteed entry.

The following admission requirements apply:

- I. Concurrent or prior admission to the MSM.
- II. Earn B grades (minimum) in Acc 201, 202 and have a 3.0 overall BYU GPA.
- III. Pass qualifying examinations in principles of financial accounting and in principles of managerial accounting. Examinations waived for students who

have completed Acc 201 and 202 at BYU or another four-year, AACSB-accredited university with B grade or better. Acc 201 must be taken within twenty-four months and Acc 202 within eighteen months before entry date.

Note 1: If a student must leave the program for a mission, internship, or other reason, a leave of absence petition is required. A prompt return to the program is urged. Students who have interrupted their SOAIS education for more than two years or without prior approval will be required to meet the requirements of the program in effect at readmission.

Note 2: Upper-division accounting class credits earned prior to five years before graduation may not be used to meet specific graduation requirements for the BS degree. This policy does not affect the recognition of those hours earned to satisfy total university credit.

Note 3: After admission to the SOAIS program, all first-year courses must be completed by the end of the first summer term to be eligible to finish remaining BS degree requirements or to be approved for continuation toward the MAcc degree.

Emphasis in Management Information Systems

Students seeking a degree in management with an emphasis in management information systems are referred to the emphasis listings in the Institute of Business Management section of this catalog.

BS Accounting, Concurrent with MAcc

The first year of the SOAIS program must be completed with a minimum 3.0 GPA to be eligible to apply for continuation into the Master of Accountancy Program. The undergraduate fourth year (Accounting Core II) is replaced by the MSM graduate core. Students planning to pursue a master of accountancy degree should not take the Accounting Core II classes.

Accounting (Acc)

Undergraduate Courses

Note: Students enrolled in nonbusiness programs requiring or recommending Acc 201 or 202 should enroll in 200.

200. Principles of Accounting. (3:3:0)

Independent Study also.
For nonmanagement majors. Introduction to financial and managerial accounting principles. Exposure to basic accounting statements, processes, and management applications.

201. Principles of Financial Accounting. (3:3:1)

First course in concepts and methods underlying financial statements. For MSM students only.

202. Principles of Managerial Accounting. (3:3:1) Prerequisite: Acc 201.

Second course in the elementary series covering managerial problems and control of business operations.

Note: SOAIS 300-level classes are available to MSM and certain other selected majors.

320. Introductory Income Tax. (3:3:0) Prerequisite: Acc 200.

Measurement and concepts of taxable income. For nonaccounting majors.

341. Business Law in the Environment. (2:2:0)

Introduction to legal principles and institutions affecting business.

343. Business Law. (3:3:0) Prerequisite: Acc 341 or equivalent.

The law relating to negotiable instruments, secured transactions, real property, wills and trusts, and bankruptcy.

Note: All 400-level classes are limited to SOAIS majors.

401. Intermediate Accounting 1. (6:6:0) Prerequisite: admission to SOAIS or consent of director; MCom 320.

The business environment; role of accounting information in that environment; objectives of financial, managerial, and tax accounting; role of information system.

402. Intermediate Accounting 2. (6:6:0) Prerequisite: Acc 401; admission to SOAIS or consent of director.

Detailed analysis of major activities of a business from various accounting perspectives; accumulating information to satisfy needs of variety of users.

403. Intermediate Accounting 3. (6:6:0) Prerequisite: Acc 402; admission to SOAIS. Continuation of Acc 402.

404. Intermediate Accounting 4. (6:6:0) Prerequisite: Acc 403; admission to SOAIS. Continuation of Acc 403.

Advanced Undergraduate or Graduate Courses

503. Advanced Financial Accounting. (3:3:0)

505. Special Problems in Accounting 1. (3:3:0)

507. Accounting for Nonprofit Organizations. (3:3:0)

522. Advanced Taxation. (3:3:0)

523. Tax Research Methodology. (3:3:6)

532. Advanced Mathematics of Business. (3:3:0)

556. Computer Applications in Tax Practice. (3:3:0)

562. Financial Auditing Methodology. (3:3:0)

584. International Accounting and Multinational Enterprises. (3:3:0)

586. Contemporary Professional Accounting Problems. (3:3:0)

599R. Accounting Internship. (1-3:0:9 ea.)

Graduate Degree Accounting Courses

See the BYU Marriott School of Management Graduate Catalog for descriptions.

612. Managerial Cost Accounting. (3:3:0)

616. Operational Auditing. (3:3:0)

620. Special Problems in Federal Taxation. (3:3:0)

621. Corporate Taxation 1. (3:3:0)

622. Corporate Taxation 2. (3:3:0)

623. Taxation of Partnerships. (3:3:0)

624. Taxation of Estates, Gifts, and Fiduciaries. (3:3:0)

625R. Current Tax Policy. (1-3:3:0 ea.)

626. Taxation of Deferred Compensation and Fringe Benefits. (3:3:0)

628. Taxation of Foreign Income. (3:3:0)

657. (Acc-MBA 607) Management Consulting and Projects. (3:3:0)

691R. Research Seminar. (3:3:0 ea.)

692R. Advanced Topics in Accounting. (3:3:0)

693R. Reading and Conference. (1-3:3:0 ea.)

Information Systems (ISys)

Undergraduate Courses

98. Microcomputer Spreadsheets Skills. (0:0:14)

Basic computer skills, focusing on spreadsheet and database programs. No technical background necessary. Fee.

199R. Cooperative Education. (1-3:Arr:Arr. ea.) Prerequisite: consent of department chair and/or cooperative education coordinator.

On-the-job experience in information analysis, training, and management.

301. Management Information Systems. (3:3:1) Prerequisite: acceptance into MSM.

Use of computers in business; management of MIS function, systems analysis and design, hardware, software, database, data communications, and end-user computing.

399R. Cooperative Business Experience Internship. (1-3:Arr:Arr. ea.) Prerequisite: completion of most emphasis requirements and consent of internship director.

On-the-job experience in information analysis, training, and management.

441. Business Computer Programming. (3:3:2) Prerequisite: ISys 301.

Solving business problems using third-generation languages. Programming concepts, structured programming, data types, basic operations, conditional statements, iterative structures, sequential file processing.

442. Advanced Business Computer Programming. (3:3:0) Prerequisite: ISys 441.

Advanced programming concepts: array processing, direct and indexed sequential file access, interactive programming, solving complex business problems.

443. Information Management Analysis. (3:3:0) Prerequisite: ISys 301.

Systems analysis and design; emphasizes information requirements, modeling techniques, input/output analysis, prototyping, and project documentation.

445. Database Analysis and Design. (3:3:0) Prerequisite: ISys 301.

Database organization; emphasizes conceptual and logical design, semantic modeling, database integrity, and security.

490R. Special Topics in Information Systems. (1-3:Arr:Arr. ea.) Prerequisite: ISys 301.

Special subjects as announced before each semester.

Advanced Undergraduate or Graduate Courses

544. Information Systems Design. (3:3:0) Prerequisite: ISys 445.

Concepts and techniques of systems analysis and design, emphasizing systems development, systems development tools, prototyping, and related topics.

546. Fourth-Generation Programming Languages. (3:3:0) Prerequisite: ISys 441.

Developing skills in advanced programming languages, emphasizing fourth-generation languages.

548. (ISys-MBA 586) Data Communications. (3:3:0) F, W, Su Prerequisite: ISys 301.

Principles of data communications, local- and wide-area networks, hardware, software, media, standards, application, implementation, management.

590R. Seminar in Information Systems. (1-3:Arr:Arr. ea.)

Intensive seminar emphasizing current thought in selected information systems topics.

599R. Cooperative Business Experience Internship. (1-3:Arr:Arr. ea.) Prerequisite: completion of most emphasis requirements and consent of internship director.

On-the-job experience in information systems, analysis, design, and management.

Graduate Degree Information Systems Courses

See the BYU Marriott School of Management Graduate Catalog for descriptions.

643. (ISys-MBA 603) Advanced Information Systems Analysis. (3:3:0)

644. (ISys-MBA 604) Advanced Information Systems Design. (3:3:0)

645. (ISys-MBA 605) Advanced Database Analysis and Design. (3:3:0)

646. (ISys-MBA 608) Advanced Fourth-Generation Programming Languages. (3:3:0)

655. Management of Information Systems. (3:3:0)

690R. Special Topics in Information Systems. (1-3:Arr:Arr. ea.)

697R. Graduate Research. (1-3:Arr:Arr. ea.)

Management Communications

See Management, J. Willard and Alice S. Marriott School of.

Managerial Economics

See Management, J. Willard and Alice S. Marriott School of.

Mandarin

See Asian and Near Eastern Languages.

Manufacturing Engineering and Manufacturing Engineering Technology

See Engineering.

Mathematics

Peter W. Bates, Chair (290 TMCB)
 Gerald M. Armstrong, Associate Chair (288 TMCB)
 Jacqueline Taylor-Ortega, Assistant Chair (286 TMCB)

Orson Pratt Professor

Cannon, James W. (1986) BA, PhD, U. of Utah, 1967, 1969.

Professors

Baker, Roger C. (1991) BSc, PhD, U. of London, England, 1968, 1971.
 Barrett, Wayne Walton (1981) BS, U. of Utah, 1968; MS, PhD, New York U., 1975, 1975.
 Bates, Peter W. (1984) BS, Queen Mary Coll., U. of London, England, 1969; PhD, U. of Utah, 1976.
 Chatterley, Louis J. (1962) BS, Brigham Young U., 1955; MS, U. of Utah, 1962; PhD, U. of Texas, Austin, 1972.
 Crawley, Peter L. (1971) BS, PhD, California Inst. of Technology, 1957, 1961.
 Fearnley, Lawrence (1957) BS, U. of London, 1953; PhD, U. of Utah, 1959; PhD, U. of London, 1970.
 Forcade, Rodney W. (1981) BS, MS, U. of Chicago, 1961, 1963; PhD, U. of Washington, 1971.
 Garner, Lynn E. (1963) BS, Brigham Young U., 1962; MA, U. of Utah, 1964; PhD, U. of Oregon, 1968.
 Gill, Gurcharan S. (1960) BS, Brigham Young U., 1958; M.S, PhD, U. of Utah, 1960, 1965.
 Hansen, Richard A. (1967) BS, MS, PhD, U. of Utah, 1959, 1961, 1965.
 Jamison, Ronald D. (1963) BS, Brigham Young U., 1957; PhD, U. of Utah, 1965.
 Lamoreaux, Jack W. (1968) BS, Brigham Young U., 1960; MS, PhD, U. of Utah, 1964, 1967.
 Lang, William E. (1989) BA, Carleton Coll., 1974; MS, Yale U., 1975; PhD, Harvard U., 1978.
 Moore, Hal G. (1961) BS, MS, U. of Utah, 1952, 1957; PhD, U. of California, Santa Barbara, 1967.
 Peterson, John Milo (1965) BS, MS, Utah State U., 1961, 1964; PhD, U. of Georgia, 1965; EdD, Utah State U., 1966.
 Pollington, Andrew D. (1982) BS, MS, PhD, U. of London, 1975, 1976, 1978.
 Robinson, Donald W. (1956) BS, MA, U. of Utah, 1948, 1952; PhD, Case Inst. of Technology, 1956.
 Smith, William V. (1985) BS, PhD, U. of Utah, 1973, 1978.
 Snow, Donald Ray (1969) BA, BS, U. of Utah, 1959, 1959; MS, MS, PhD, Stanford U., 1960, 1962, 1965.
 Speiser, Robert David (1984) AB, Columbia Coll., 1965; PhD, Cornell U., 1970.
 Wight, Theodore A. (1963) BS, MS, EdD, U. of Utah, 1955, 1964, 1969.
 Wright, David G. (1983) BS, Brigham Young U., 1970; MA, PhD, U. of Wisconsin, Madison, 1972, 1973.

Associate Professors

Armstrong, Gerald M. (1970) BS, MS, Brigham Young U., 1963, 1965; PhD, U. of Wisconsin, Madison, 1971.
 Chahal, Jasbir S. (1981) MA, Punjab U., India, 1970; PhD, Johns Hopkins U., 1979.
 Garbe, Douglas G. (1963) AS, Snow Coll., 1956; BS, Brigham Young U., 1962; MS, U. of Oregon, 1967; PhD, U. of Texas, Austin, 1973.
 Skarda, R. Vencil (1965) BA, Pomona Coll., 1961; MS, PhD, California Inst. of Technology, 1964, 1965.
 Tolman, L. Kirk (1965) BS, MS, Brigham Young U., 1960, 1961; PhD, U. of New Mexico, 1972.
 Walter, Charles N. (1969) BA, MA, PhD, U. of New Mexico, 1963, 1965, 1970.
 Wynn, Jan Eugene (1966) BS, BS, U. of Idaho, 1962, 1962; MS, Utah State U., 1965; PhD, Colorado State U., 1972.

Assistant Professors

Conner, Gregory R. (1992) BA, Humboldt State U., 1987; MS, PhD, U. of Utah, 1989, 1992.
 Humphries, Stephen P. (1987) BSc, MSc, PhD, U. of Wales, 1974, 1978, 1983.
 Lawlor, Gary R. (1991) BS, Brigham Young U., 1984; PhD, Stanford U., 1988.
 Lu, Kening (1990) BS, MS, Sichuan U., China, 1982, 1985; PhD, Michigan State U., 1988.
 Lundquist, Michael E. (1990) BA, St. Olaf Coll., 1985; MS, PhD, Clemson U., 1987, 1990.
 Ouyang, Tiancheng (1992) MS, Naukai U., 1981; PhD, U. of Minnesota, 1989.

Lecturer

Taylor-Ortega, Jacqueline (1978) BS, Idaho State U., 1966; MA, EdD, Brigham Young U., 1976, 1987.

Emeriti

Clawson, Robert G. (1979) AA, Pasadena City Coll., 1960; BA, California State U., Los Angeles, 1963; MS, U. of South Dakota, 1971.
 Fletcher, Harvey J., Jr. (1980) BS, Massachusetts Inst. of Technology, 1944; MS, California Inst. of Technology, 1948; PhD, U. of Utah, 1954.
 Gee, Burton C. (1960) BS, Brigham Young U., 1951; MS, EdD, Oregon State U., 1958, 1965.
 Haupt, Floyd E. (1954) BS, MS, U. of Arizona, 1947, 1948.
 Hillam, Kenneth L. (1957) BS, MS, U. of Utah, 1949, 1956; PhD, U. of Colorado, 1962.
 Larsen, Kenneth M. (1960) BA, U. of Utah, 1950; MA, Brigham Young U., 1956; PhD, U. of California, Los Angeles, 1964.
 Wickes, Harry E. (1957) BS, MEd, Brigham Young U., 1950, 1954; MEd, Harvard U., 1962; EdD, Colorado State U., 1967.

Programs and Degrees

BS	Mathematics
BA	Mathematics Education
BS	Honors in Mathematics and University Honors

MS	Mathematics
MA	Mathematics
MA	Mathematics Education
PhD	Mathematics

Mathematics is central to life in a technological society. The rigor and discipline required to excel in mathematics develop skills that are in constant demand. Therefore, graduates obtain positions in a wide variety of business, governmental, and industrial enterprises. Mathematics majors also are sought after by professional schools of law, medicine, and management. Mathematical experience beyond basic calculus enhances the life and the capabilities of every intellectually curious student.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Required High School Preparation

Note: It is recommended that a student complete the following courses in high school:

3 units of English
 1 unit of physical science, either chemistry or physics.

Because mathematics provides the foundation for all work in the physical and mathematical sciences, particular attention is paid to high school preparation in this subject.

4 units of mathematics, consisting of 2.5 units of algebra, 1 unit of geometry, and .5 unit of trigonometry. This should qualify students to begin college mathematics with Math 112H, analytic geometry and calculus.

Advanced placement credit is available in mathematics. Completion of the AP calculus AB exam with a score of 3 enables one to receive credit for Math 110, 111, and 3 elective credits. A score of 4 or 5 on the AB exam allows credit for Math 110, 112, and 1 elective credit. Students passing the BC exam with a score of 3, 4, or 5 receive credit for Math 112 and 113. Students should direct Educational Testing Service (ETS) to report the score to BYU to have credit posted on their transcripts.

To decide which mathematics course should be taken first, write to the Mathematics Department, 292 TMCB, and request placement.

Core Requirements for All Degree Programs in Mathematics

- I. Calculus and linear algebra courses, Math 112H, 113H, 343, 344, completed with a grade of C or better.
- II. A degree study plan prepared by the Mathematics Department is available in the

College of Physical and Mathematical Sciences Advisement Center. The advisement center and the Mathematics Department can make recommendations for General Education and supporting courses.

BS Mathematics

This degree is designed to provide a broad background in mathematical skills, emphasizing problem solving as well as providing some depth in established mathematical topics.

I. In addition to above core requirements: Math 190, 315, 332; 350, 355, or 487; 371, 434. (It is recommended that Math 343 and 371 be completed as soon as possible during the first two years.)

II. CS 142, 130, or 131 or familiarity with C or some object-based computer language.

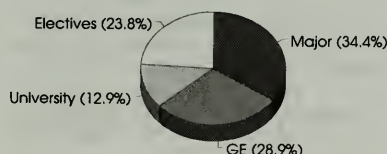
III. Stat 321.

IV. After consultation with an advisor, one of the 6-credit-hour sequences—Math 372, 541; 372, 542; 521, 522; 311, 411; 323, 511; 551, 552; or 541, 542.

V. An additional 6 or more credit hours of course work taken from Math 300, 302, 311, 323, 350, 355, 372, any mathematics course numbered 400 or above, CS 561, Stat 463, or Phscs 517.

VI. A grade of C or better in each course.

Summary of Degree Requirements for BS Mathematics



1. Total hours	128.0
2. Major hours ♦	44.0
3. General Education requirements	37.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	30.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

General Information

I. All mathematics majors must pass a written comprehensive examination, normally given during the first semester of the senior year. They must also participate in the senior tutorial (Math 490R) for a *minimum* of one semester during the senior year.

II. Majors are strongly urged to study Phscs 121 and 122 during their first two years and to choose elective mathematics courses in sequence for depth—for example, 350, 355, 487; 371, 372, 487; 311, 411; 323, 511; 521, 522.

III. It is recommended that those who plan subsequent graduate work in mathematics choose the courses Math 372, 541, 542, thereby acquiring some depth in two fundamental areas. They also are urged to become competent in either the French, German, or Russian language. Those who plan to earn the doctorate in mathematics should choose Math 551 and 552 as well and should become competent in *two* of the listed languages while an undergraduate.

IV. It is strongly recommended that RelC 491 be taken during the senior year.

Suggested Sequence of Courses

First Year	F	W
Math 112H, 113H	4	4
Math 190, 343	2	3
RelA 121, 122	2	2
CS 142		2
Phscs 121, 122	3	3
Electives and General Education	5	3
Total	15	17

Second Year	F	W
Math 315, 371	3	3
Math 344	3	
Stat 321		3
Mathematics elective	3	3
Religious Education	2	2
Electives and General Education	5	5
Total	16	16

Third Year	F	W
Math 350, 355, or 487; 434	3	3
Math 332	3	
Mathematics electives	6	6
Religious Education	2	2
Electives and General Education	2	5
Total	16	16

Fourth Year	F	W
Mathematics electives	6	6
RelC 491, 492	1	1
Electives and General Education	8	9
Total	16	16

BA Mathematics Education

This degree prepares the student to teach mathematics in the secondary and middle schools. See Mathematics in the Secondary Education section of this catalog for information about this teaching major.

BS with Honors in Mathematics and University Honors

I. Honors requirements:

- The Honors General Education graduation requirements as listed in the Honors Education section of this catalog. The foreign language proficiency requirement should be met in German, Russian, French, or a substitute approved by the Mathematics Department because of its relevance to the research for the senior thesis.
- General Education requirements that are not met by advanced placement (AP) credit should be filled by Honors sections of GE courses wherever possible.

II. Mathematics requirements:

- Calculus and linear algebra courses: Math 112H, 113H, 343, 344.
- Math 190, 315, 332, 350 or 355, 371, 372, 434, 487, 499R, 541, 542, and either of the two sequences 521, 522 or 551, 552. (It is recommended that Math 343 and 371 be completed as soon as possible during the first two years.)
- Familiarity with C or some object-based computer language (e.g., CS 142), Stat 321. Strongly recommended: Phscs 121, 122.
- Honors senior thesis (see Math 499R) based on an individual mathematical research project. This example of mathematical exposition is to be prepared under the direction of a research advisor selected from the mathematics faculty. It requires a carefully prepared written paper approved by a department reading committee and presented orally at a department colloquium or at the College Spring Research Conference. An article accepted for publication by an undergraduate mathematics research journal may be used to satisfy this requirement.
- File a degree study plan prepared in consultation with the college advisement center, the Honors Program, and the Mathematics Department.
- During senior year: RelC 491R, 492R, taught by the College of Physical and Mathematical Sciences.

Suggested Sequence of Courses

First Year	F	W
Math 112H, 113H	4	4
Math 190, 343	2	3
RelA 121, 122	2	2
CS 142		2

Mathematics

Phcs 121, 122	3	3
Electives and General Education	6	2
Total	16	16
Second Year		
Math 371, 372	3	3
Math 344, 315	3	3
Stat 321	3	
Math 332		3
Religious Education	2	2
Electives and General Education	5	5
Total	16	16
Third Year		
Math 350 or 355, 434	3	3
Math 541, 542	3	3
Math 487, elective	3	3
Religious Education	2	2
Electives and General Education	5	5
Total	16	16
Fourth Year		
Math 499R (thesis)	3	
Mathematics electives	6	6
RelC 491, 492	1	1
Electives and General Education	6	9
Total	16	16

Minor

A minor in mathematics requires completion of (with every grade a C– or better) the mathematics core plus two additional courses (6 credit hours) from Math 300, 302, 311, 315, 323, 332, 350, 355, 371, 372, 387, and any 400- or 500-level mathematics course. Courses offered by other departments cannot be substituted.

Teaching Minor: The requirements for a teaching minor for students certifying in another area are given in the Secondary Education section of this catalog.

Mathematics (Math)

Undergraduate Courses

Note: For courses containing material preparatory to Math 97 (up through beginning algebra) please refer to Independent Study.

97. Intermediate Algebra. (0:2:1) F, W, Sp, Su Independent Study also. Prerequisite: high school algebra.

Elementary logic, real number system, equations and inequalities (linear, polynomial, rational, and radical expressions), graphing, function notation, inverse function, exponential functions, systems of equations, variations. Fee.

110. College Algebra. (3:3:0) F, W, Sp, Su Independent Study also. Prerequisite: Math 97 or equivalent.

Functions, polynomials, theory of equations, exponential and logarithmic functions, matrices, determinants, systems of linear equations, permutations, combinations, binomial theorem.

111. Trigonometry. (2:2:0) F, W, Sp, Su Independent Study also. Prerequisite: Math 110.

Circular functions, triangle relationships, identities, inverse trig functions, trigonometric equations, vectors, complex numbers, DeMoivre's theorem.

112, 113. Calculus 1, 2. (4:5:0 ea.) F, W, Sp, Su Honors and Independent Study also. Prerequisite: Math 110 and 111 or equivalent.

Plane analytic geometry; one-dimensional differential and integral calculus, with applications. Math 112 continues in Math 113. Math 113 continues in Math 343, 344.

119. Introduction to Calculus. (4:4:1) F, W, Sp, Su Independent Study also. Prerequisite: Math 110.

Introduction to plane analytic geometry and one-dimensional calculus. For students in the College of Biology and Agriculture and the Marriott School of Management.

190. Fundamentals of Mathematics. (2:2:0) F, W Prerequisite: Math 112 or concurrent enrollment with instructor's consent.

Logic, set theory, integers, real numbers, induction, modular arithmetic, inclusion, exclusion, cartesian products, relations, functions, cardinality.

214. Multivariate Calculus. (3:3:0) Independent Study only. Prerequisite: Math 113.

Calculus of vector functions. Credit not given for both Math 214 and 215.

215. Introductory Multivariate Calculus. (2:2.5:0) Independent Study only. Prerequisite: Math 113.

Vector calculus. Partial differentiation, multiple integration. The gradient and curl, 3-space geometry. Credit not given for both Math 214 and 215.

300. History of Mathematics. (3:3:0) F, W, Su Independent Study also. Prerequisite: Math 112.

Development of mathematics, emphasizing underlying principles and motivations.

301. Finite Mathematics for Teachers. (3:3:0) F, W Independent Study also. Prerequisite: Math 110 or 305.

Sets, logic, combinatorics, and probability. Required of prospective secondary mathematics teachers.

302. Survey of Geometry. (3:3:0) W, Alt. term Independent Study also. Prerequisite: Math 112.

Logical structure of Euclidean, non-Euclidean, and finite geometries. Required of prospective secondary mathematics teachers but open to all.

305. Basic Concepts of Mathematics. (4:4:0) F, W, Sp, Su Independent Study also. Prerequisite: Math 110.

Logic and number theory, number and numeration systems, informal geometry, and probability. Required of prospective elementary school teachers.

306. Concepts of Mathematics. (3:3:0) F, W, Sp, Su Independent Study also. Prerequisite: Math 305.

Modular arithmetic, real numbers, complex numbers, relations and functions, informal geometry, and consumer math. For elementary teacher certification.

311. Introduction to Numerical Methods. (3:3:0) F, W, Sp Prerequisite: calculus and knowledge of a programming language.

Interpolation, curve fitting, numerical differentiation and integration, and numerical solutions to linear, nonlinear, and differential systems.

312. Advanced Engineering Mathematics. (3:3:0) F, W, Sp Prerequisite: Math 113 or equivalent.

Ordinary differential equations, linear algebra, vector calculus, and introduction to partial differential equations.

313. Advanced Engineering Mathematics. (3:3:0) F, W, Su Prerequisite: Math 312.

Ordinary differential equations, linear algebra, vector calculus, and introduction to partial differential equations.

315. Theory of Analysis. (3:3:0) F, W, Sp, Su Prerequisite: Math 113. Recommended: Math 344 or concurrent registration.

Problem course in single variable analysis from a rigorous viewpoint.

321. Introductory Ordinary Differential Equations. (2:2.5:0) Independent Study only. Prerequisite: Math 113, 343.

Elementary differential equations, homogeneous equations, Laplace transforms, systems of differential equations. Credit not given for both Math 321 and 434.

322. Applied Complex Analysis. (2:2.5:0) Prerequisite: Math 215.

Complex number algebra, analytic functions, integration in the complex plane, Taylor and Laurent series, conformal mapping, Riemann surfaces. Credit not given for both Math 322 and 332.

323. Introduction to Partial Differential Equations. (3:3:0) F, W, Su Prerequisite: Math 313 or 434.

Boundary value problems; transform methods; Fourier series; Bessel functions; Legendre polynomials.

332. Introduction to Complex Analysis. (3:3:0) F, W, Sp Prerequisite: Math 344.

Complex algebra, analytic functions, integration in the complex plane, infinite series, theory of residues, conformal mapping.

343. Elementary Linear Algebra. (3:3:0) F, W, Sp, Su Prerequisite: Math 112 or 119.

Linear systems, matrices, vectors and vector spaces, linear transformations, determinants, inner product spaces, eigenvalues, and eigenvectors.

344. Calculus of Several Variables. (3:3:0) F, W, Sp, Su Prerequisite: Math 113, 343.

Partial differentiation, the Jacobian matrix, and integral theorems of vector calculus.

350. Combinatorics. (3:3:0) F, Sp alt. yr. Prerequisite: Math 113, 371.

Permutations, combinations, recurrence relations, applications.

355. Graph Theory. (3:3:0) W, Su alt. yr. Prerequisite: Math 343, 371.

Maps, graphs and digraphs, coloring problems, applications.

371, 372. Abstract Algebra. (3:3:0 ea.) 371: F, W, Sp; 372: F, W Prerequisite: Math 343; for 372, Math 371.

Groups, rings, fields, vector spaces, linear transformations, matrices, field extensions, etc.

387. Elements of Number Theory. (3:3:0) F, Su Prerequisite: Math 110 or 301.

Basic concepts; congruences; residues; Diophantine equations.

391R, 392R. Seminar in Mathematics. (1:1:0 ea.) 391R: F; 392R: W

Topics from classical problems of antiquity, combinatorial mathematics, graph theory, real functions, number theory, functional equations.

399R. Cooperative Education. (1–9:9:0 ea.) On dem.

On-the-job experience.

411. Numerical Methods. (3:3:0) F, W Prerequisite: Math 311; 313 or 434.

Continued fractions, rational and economized approximations; ordinary differential equations, initial, boundary, and systems; eigenvalues; nonlinear systems of equations; Fourier and other orthogonal methods; multiple integrals; minimum methods.

434. Ordinary Differential Equations. (3:3:0) F, W, Sp Prerequisite: Math 113, 343.

Methods and theory of ordinary differential equations. Credit not given for both Math 321 and 434.

451R. Topics in Geometry. (3:3:0 ea.) W Prerequisite: Math 302, 343, or equivalent.

Topics selected from the various aspects of synthetic, analytic, algebraic, and differential geometry, etc.

480. Mathematical Models. (3:3:0) F Prerequisite: Math 311, 343, 344; 313 or 434.

Construction, solution, and interpretation of discrete and continuous models applied to problems in the physical, natural, and social sciences.

487. Number Theory. (3:3:0) W Prerequisite: Math 371.

Foundations; congruences; quadratic reciprocity; unique factorization, prime distribution or Diophantine equations.

495R. Readings in Mathematics. (1–2:0:3 ea.) F, W, Sp, Su Prerequisite: instructor's consent.

Directed readings beyond the scope of usual undergraduate courses.

499R. Senior Thesis. (1–3:0:3 ea.) F, W, Sp, Su

Advanced Undergraduate or Graduate Courses

501. Real Numbers. (3:3:0) F Prerequisite: Math 371.

Extensive examination of various axiomatic descriptions of real numbers and interrelationships among these descriptions.

502. Set Theory. (3:3:0) W Prerequisite: Math 371.

Zermelo-Fraenkel axioms for set theory, the axiom of choice, ordinal and cardinal numbers, and algebra of sets.

511. Numerical Methods for Partial Differential Equations. (3:3:0) W Prerequisite: Math 311, 343; 313 or 434. Recommended: Math 323.

Methods of characteristics, classification of equations, finite difference methods for partial differential equations.

512. Numerical Analysis. (3:3:0) W Prerequisite: Math 411.

Theory of constructive methods in mathematical analysis.

513R. Advanced Topics in Applied Mathematics. (3:3:0 ea.) On dem. Prerequisite: instructor's consent.

521, 522. Methods of Applied Mathematics. (3:3:0 ea.) 521:F; 522:W Prerequisite: Math 343, 434; 521 for 522.

Survey of current methods, continuous and discrete, including linear algebra, estimation, differential equations of equilibrium, eigenvalue and initial value problems; finite element, spectral, transform and difference methods; Fourier series, the Fourier matrix, fast Fourier transform; convolution.

529R. Topics in Mathematics Education. (3:0:0 ea.) On dem. Prerequisite: instructor's consent.

Current research and curriculum in mathematics education nationally and internationally; research techniques and interpretation.

530. Calculus of Variations. (3:3:0) On dem. Prerequisite: Math 313 or 434; 343.

Recommended: Math 315, 323.

Euler-Lagrange equation, sufficient conditions, Hamilton's principle of least action, Dirichlet's principle; applications to mechanics, geometry, economics, eigenvalue problems, direct methods.

541. Multivariable Analysis. (3:3:0) W, Su Prerequisite: Math 315, 343, 344.

Rigorous treatment of multivariable calculus including implicit and inverse function theorems and differential forms.

542. Measure Theory. (3:3:0) F Prerequisite: Math 315, 343, 344 (not open to students with credit in Math 641)

Lebesgue measure, integration theory, other measures, Banach spaces.

543. Advanced Probability. (3:3:0) Sp Prerequisite: Math 344, Stat 341.

Advanced combinatorial methods, random walk, Markov chains, and stochastic processes.

551, 552. Introduction to Topology. (3:3:0 ea.) 551:F; 552:W Prerequisite: Math 315 for 551; Math 551 for 552.

Axiomatic treatment of linearly ordered spaces, metric spaces, arcs, and Jordan curves; types of connectedness.

585. Matrix Analysis. (3:3:0) W Prerequisite: Math 343.

Special classes of matrices, canonical forms, matrix and vector norms, localization of eigenvalues, matrix functions, applications.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

629. Teaching Mathematics in Secondary Schools. (3:2:0)

631, 632. Complex Analysis. (3:3:0 ea.)

634, 635. Theory of Ordinary Differential Equations. (3:3:0 ea.)

641, 642. Functions of a Real Variable. (3:3:0 ea.)

643R. Special Topics in Analysis. (3:3:0 ea.)

644. Harmonic Analysis. (3:3:0)

647, 648. Theory of Partial Differential Equations. (3:3:0 ea.)

651, 652. General Topology 1, 2. (3:3:0 ea.)

653R. Special Topics in Geometry. (3:3:0 ea.)

655, 656. Algebraic Topology 1, 2. (3:3:0 ea.)

661, 662. Functional Analysis. (3:3:0 ea.)

671, 672. Algebra. (3:3:0 ea.)

673. Theory of Associative Rings. (3:3:0)

675R. Special Topics in Algebra. (3:3:0 ea.)

676. Commutative Algebra. (3:3:0)

677. Homological Algebra. (3:3:0)
- 680R. Advanced Topics in Algebraic Geometry. (3:3:0 ea.)
- 687R. Topics in Analytic Number Theory. (3:0:0 ea.)
- 688R. Topics in Algebraic Number Theory. (3:0:0 ea.)
- 695R. Readings in Mathematics. (1-2:2:0 ea.)
- 699R. Master's Thesis. (1-9:Arr:0 ea.)
- 751R. Advanced Special Topics in Topology. (3:3:0 ea.)
- 780R. Seminar in Algebraic Geometry. (3:3:0 ea.)
- 799R. Doctoral Dissertation. (1-9:Arr:Arr. ea.)

Mechanical Engineering

See Engineering.

Microbiology

Donald N. Wright, Chair (775 WIDB)

Professors

- Jensen, James B. (1989) BS, MS, Brigham Young U., 1970, 1972; PhD, Auburn U., 1976.
- Jensen, Marcus M. (1969) BS, MS, Utah State U., 1952, 1954; PhD, U. of California, Los Angeles, 1961.
- Johnson, F. Brent (1972) BS, MS, PhD, Brigham Young U., 1966, 1967, 1970.
- Murray, Byron K. (1983) AS, Ricks Coll., 1964; BS, MS, PhD, Brigham Young U., 1966, 1969, 1971.
- North, James A. (1965) BS, MS, Brigham Young U., 1958, 1960; PhD, U. of Utah, 1964.
- Sagers, Richard D., (1958) BS, MS, Brigham Young U., 1954, 1955; PhD, U. of Illinois, 1958.
- Wright, Donald N. (1969) BS, U. of Utah, 1958; PhD, Iowa State U. of Science and Technology, 1964.

Associate Professors

- Anderson, Shauna C. (1974) AS, Ricks Coll., 1965; BS, Brigham Young U., 1967; MS, U. of Utah, 1973; PhD, U. of Washington, 1984.
- Leavitt, Ronald W. (1977) BA, U. of California, Riverside, 1967; MS, U. of Illinois, 1969; PhD, U. of California, San Diego, 1975.
- Teuscher, Cory (1990) BS, Utah State U., 1977; MS, Brigham Young U., 1979; PhD, U. of New Mexico, 1982.
- Woodward, Scott R. (1989) BS, PhD, Utah State U., 1980, 1983.

Assistant Professors

- Cockayne, Susan (1982) BS, MS, U. of Utah, 1972, 1979; PhD, Brigham Young U., 1990.
- O'Neill, Kim L. (1992) BSc, DPhil, New U. of Ulster, Northern Ireland, 1984, 1986.
- Robison, Richard A. (1991) BS, MS, PhD, Brigham Young U., 1978, 1980, 1988.

Instructor

- Allman, Glenn Walker (1970) BS, MS, Brigham Young U., 1963, 1972.

Adjunct Professors

- Bennett, Bodily, Richardson, Williams

Adjunct Clinical Professors

- Critchfield, Freestone, Thorn, Urie

Adjunct Clinical Instructors

- Baczuk, Darling, Dawson, Poulsen, Schiess

Director, Laboratory Support Services

- Lee, John D. (1972) BS, MS, Brigham Young U., 1972, 1976.

Emeriti

- Beck, Jay V. (1951) BA, MA, Brigham Young U., 1933, 1936; PhD, U. of California, Berkeley, 1940.
- Bradshaw, Willard H. (1961) BS, MS, Brigham Young U., 1952, 1953; PhD, U. of California, Berkeley, 1957.
- Donaldson, David M. (1955) BS, MS, PhD, U. of Utah, 1950, 1952, 1954.
- Hoskisson, William A. (1957) BS, MS, Utah State U., 1938, 1941; PhD, U. of Illinois, 1944.
- Larsen, Don H. (1952) BS, Brigham Young U., 1940; MA, U. of Nebraska, Lincoln, 1942; PhD, U. of Utah, 1950.

Programs and Degrees

- BS Microbiology
Emphases:
Microbiology
Premedical-Predental Microbiology
- BS Biology Composite Teaching
- BS Molecular Biology
- BS Honors in Microbiology and University Honors
- BS Honors in Molecular Biology and University Honors
- BS Clinical Laboratory Science
- MS Microbiology
Emphases:
Clinical Laboratory Science
Immunology
Microbiology
Physiology
Virology
- MS Molecular Biology (collegewide interdisciplinary degree)
- PhD Microbiology
Emphases:
Immunology
Microbiology
Physiology
Virology
- PhD Molecular Biology (collegewide interdisciplinary degree)

The Microbiology Department offers programs leading to specialization in immunology, virology, molecular biology, medical microbiology, microbial genetics, microbial physiology, and clinical laboratory science. Graduates are employed in a wide variety of positions in industry, hospitals, government agencies, and universities. Microbiology offers excellent preparation for students who wish to pursue careers in the biological sciences, medicine, dentistry, or law.

BS-MS Integrated Master's Program

The integrated microbiology program is a five-year curriculum during which students simultaneously work for both the BS and MS in microbiology. The purpose of this program is to increase flexibility of course scheduling, decrease the time normally necessary to complete both degrees independently, and to increase opportunity for student laboratory research. The specific requirements for this program are basically the same as those for the MS degree in microbiology but include the following:

- I. Admission and entry
 - A. Program applications must be received during the sixth semester of study. Students unable to complete all course requirements by the end of a total of five years' enrollment will not be accepted.
 - B. Applicants must have a minimum 3.3 cumulative GPA and no grade lower than a B in major or supportive science courses.
- II. Requirements for the degree
 - A. Minimum of 158 credit hours including 30 hours of graduate-level courses (500 or 600), of which 6 thesis hours (Mcbio 699R) are required.
 - B. Required courses: Math 119, Stat 222, Biol 130, Phscs 105, 106, 107, 108, Chem 105, 106, 107, 226, 351, 352, 353, 481, 582, 584, 689, Zool 503, Mcbio 100, 265, 291, 341, 342, 351, 365, 402, 403, 404, 425, 441, 442, 481, 502, 504; 691R each semester after acceptance; 18 additional hours must be completed from graduate-level courses including 695R.
 - C. Biochemistry minor (courses included under required courses).
 - D. One semester of approved teaching experience.
 - E. Thesis: Standard university thesis or journal publication format.
 - F. Examination: Oral examination on thesis and course work.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Microbiology Except Biology Composite Teaching Emphasis and Clinical Laboratory Science.

- I. Major courses: Mcbio 100, 265, 291, 341, 342, 351, 365, 404.
- II. Biol 130.
- III. Supporting courses: Chem 105, 106, 107, 351, 352, 353, 481; Phscs 105, 106, 107, 108.
- IV. No more than 5 hours of D credit in required supporting courses and no grades lower than C- in microbiology will be accepted for graduation.
- V. Students must complete a minimum of 12 credits in microbiology courses numbered 400 or higher while in residence.

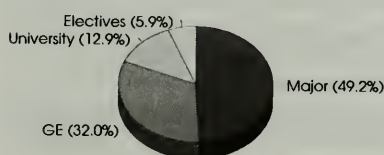
Note: It is important for each microbiology major to contact the College of Biology and Agriculture Advisement Center to obtain recommendations for General Education courses.

BS Microbiology

This is the preferred degree for microbiology majors who desire an advanced degree (MS, PhD) in microbiology.

- I. In addition to above core requirements: Mcbio 402, 403, 425, 481, 491, 495 (2 hours).
- II. Supporting courses: Math 119; Chem 223 or 226.
- III. Qualified students who are contemplating an advanced degree in microbiology may substitute the following classes for those that are listed under core supporting courses: Math 111, 112, 113; Chem 111, 112; Phscs 121, 122, 221, 222.

Summary of Degree Requirements for BS Microbiology



1. Total hours 128.0
2. Major hours ♦ 63.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 7.5
6. 40 hours upper-division GPA requirement of 2.0

7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

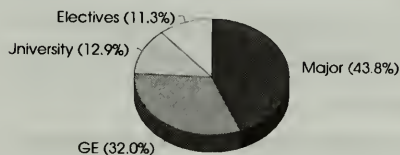
♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Premedical-Predental Emphasis

This emphasis is for individuals in premedical and predoctoral programs who desire a strong background in microbiology or career alternatives in microbiology.

- I. In addition to above core requirements: Mcbio 402, 403, 481.
- II. Supporting courses: Math 119; Chem 223 or 226.
- III. Recommended electives for premedicine: Mcbio 391; Zool 260, 339, 380, 460, 475.
- IV. Recommended electives for predoctoral: Mcbio 391; Zool 260, 329, 429, 460, 475.

Summary of Degree Requirements for Premedical-Predental Emphasis



1. Total hours 128.0
2. Major hours ♦ 56.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 14.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

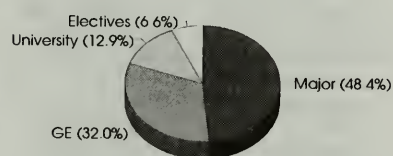
BS Biology Composite Teaching

See Biology in the Secondary Education section of this catalog for information about this teaching major.

BS Molecular Biology

- I. Complete departmental core requirements and the following microbiology and supporting courses.
- II. Math 112, 113; Phscs 121, 122, 221 (preferred); Chem 586.
- III. Mcbio 425, 441, 442, 491.

Summary of Degree Requirements for BS Molecular Biology



1. Total hours 128.0
2. Major hours ♦ 62.0
3. General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 8.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BS with Honors in Microbiology and University Honors

I. Honors requirements: Honors core and other Honors graduation requirements. The foreign language proficiency requirement should be met in Spanish, German, Russian, French, Japanese, or an approved substitute. All GE requirements not met through Advanced Placement (AP) are to be filled by taking Honors sections of GE courses where possible.

- II. Microbiology requirements:
 - A. Departmental core requirements as indicated in this catalog.
 - B. Mcbio 402, 403, 425, 481, 491.

- C. Electives: Two of Phil 205, 210, 211, HonP 344, plus advanced major elective as specified in this catalog.
- D. Supporting courses: Math 112H; Chem 223 or 226.
- E. Honors thesis: Complete thesis in microbiology and register for a minimum of 3 credit hours of Mcbio 499R. Thesis to be completed under direction of faculty member in Department of Microbiology and represents a report suitable for publication. Thesis proposal must be approved by department chair and Honors Program dean before research is begun. Students intending to graduate with Honors in microbiology may elect to receive support as research assistants during spring and summer terms between their junior and senior years for the purpose of performing research necessary for their theses. Oral presentation of research results to be made at a Microbiology Department seminar or some comparable forum. Departmental approval for thesis is obtained through usual Honors Program procedure for approval of Honors thesis.

BS with Honors in Molecular Biology and University Honors

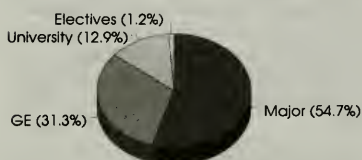
- I. Complete curriculum requirements listed above for BS in molecular biology.
- II. Complete Honors requirements listed above for BS with Honors in microbiology and university Honors.

BS Clinical Laboratory Science

This degree is for students who desire to practice medical technology in diagnostic laboratories or related options. The curriculum in clinical laboratory science is fully accredited by the American Medical Association.

- I. Major courses: Mcbio 102, 265, 341, 351, 392, 393, 394, 395, 399R, 402, 403, 407, 420, 421, 491R.
- II. Supporting courses: Zool 260, 317; Phscs 105, 106; Math 110; Stat 221; Chem 105, 106, 107, 351, 352, 481; Biol 130. Students desiring a minor in chemistry must take Chem 223.

Summary of Degree Requirements for BS Clinical Laboratory Science



- 1. Total hours 128.0
- 2. Major hours 70.0

- 3. General Education requirements 40.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 6.0
 - Advanced Writing 3.0
- 4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- 5. Elective hours 1.5
- 6. 40 hours upper-division GPA requirement of 2.0
- 7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor

Mcbio 351, 402, 403, 404, 481.

Major hours req.: 15

Microbiology (Mcbio)

Undergraduate Courses

- 100. Introduction to Microbiological Techniques.** (1:0:3)
Nature, functions, and basic techniques of microbiological laboratories.
- 102. Introduction to Clinical Laboratory Techniques.** (1:0:3)
Hospital laboratory techniques.
- 221. General Microbiology.** (3:3:0)
Independent Study also. Honors also.
Prerequisite: any chemistry course and any biology course.
Microbial world, emphasizing communicable diseases, their cause and control. Recommended for students seeking a liberal education in microbiology who do not have the prerequisites to take the more advanced courses.
- 222. General Microbiology Laboratory.** (1:0:2) Prerequisite: Mcbio 221 or concurrent registration.
- 265. Laboratory Methods.** (2:0:6)
Prerequisite: Biol 130, Chem 105, 107, or equivalents.
Introduction to laboratory methodology used in microbiology, immunology, and molecular biology.
- 291. Readings in Science.** (1:1:0) Prerequisite: Biol 130 or equivalent.
Introduction to scientific literature, library methods in science, and literature search techniques.

- 311. Disease and Public Health.** (3:3:0)
A philosophical introduction to science of microbiology. Roles of individual and community in maintaining a healthful environment.
- 341. (Mcbio-Botny-Zool) Genetics and Cellular Biology I.** (4:4:1) Prerequisite: Biol 130.
General genetics and molecular biology of cellular structure and function.
- 342. (Mcbio-Botny-Zool) Genetics and Cellular Biology 2.** (3:3:1) Prerequisite: Botny-Mcbio-Zool 341.
Continuation of Mcbio-Botny-Zool 341.
- 343. Genetics and Cellular Biology Laboratory.** (1:0:3) Prerequisite: Botny-Mcbio-Zool 342 or concurrent registration.
- 351. Microbiology.** (3-5:5:0) Prerequisite: Biol 130, Chem 351, Mcbio 341.
Principles and applications of microbiology. A thorough introduction to the discipline for majors.
- 361. Food and Dairy Microbiology.** (3:2:3)
Prerequisite: Mcbio 221 or equivalent.
Basic study of microorganisms important in food preservation, spoilage, food-borne illness, and production processing.
- 365. Advanced Laboratory Methods.** (2:0:6)
Prerequisite: Mcbio 265, 351, or concurrent registration.
Experimental methodology in bacteriology, immunology, and virology. Investigative approach to experimental microbiology.
- 391. Clinical Pathology.** (3:3:0)
Theory and application of diagnostic methods employed in clinical laboratories.
- 392. Hematology and Coagulation Theory.** (2.5:2.5:0) Prerequisite: program acceptance.
Normal and abnormal hematology and coagulation theory.
- 393. Immunohematology.** (2.5:2.5:0)
Prerequisite: program acceptance.
Theory and practice of bloodbanking.
- 394. Practical Hematology and Coagulation.** (2:0:6) Prerequisite: Mcbio 392 or concurrent registration.
Laboratory to accompany Mcbio 392; emphasizes medical laboratory techniques in hematology and coagulation.
- 395. Practical Immunohematology.** (2:0:6)
Prerequisite: Mcbio 393 or concurrent registration.
Laboratory to accompany Mcbio 393; medical laboratory techniques in immunohematology.
- 399R. Cooperative Education: Clinical Laboratory Experience.** (1-9:0:40 ea.)
- 402. Biology of the Immune System.** (3:3:0)
Prerequisite: Mcbio 351.
Fundamentals of immune mechanisms.

403. Medical Microbiology. (3:3:0)
Prerequisite: Mbio 351 or equivalent.
Introduction to infectious diseases.

404. General Animal Virology. (3:3:0)
Prerequisite: Mbio 351 or equivalent.
Basic principles of animal and medical virology.

407. Clinical Microbiology. (4:2:6)
Prerequisite: Mbio 403 or equivalent.
Approaches to laboratory diagnosis of infectious diseases.

420. Pathophysiology and Laboratory Diagnosis in Clinical Chemistry and Urinalysis. (5:5:0) Prerequisite: Chem 223, 351, 352.
Medical laboratory techniques in urinalysis, clinical chemistry.

421. Pathophysiology and Laboratory Diagnosis (Laboratory). (4:0:12)
Prerequisite: concurrent registration in Mbio 420.

425. Molecular Genetics of Prokaryotes. (4:3:3) Prerequisite: Mbio 341, 342, 351, Chem 481.
Molecular basis of genetics of bacteria and bacteriophages, including mechanisms of DNA transfer, uptake, recombination, replication, and mutation.

441. Molecular Biology of the Gene. (3:3:0)
Prerequisite: Mbio 341, 342, 351, Chem 351, 352.
Molecular biology of gene structure and expression in prokaryotic and eukaryotic organisms.

442. Molecular Biology Laboratory. (2:0:6)
Laboratory to accompany Mbio 441. Fee.

481. History of Microbiology. (1:1:0)
Prerequisite: Mbio 351.

491R. Selections in Critical Literature. (1:1:0 ea.) Prerequisite: Mbio 404, senior status.

495R. Special Problems. (1–4:Arr.:Arr. ea.)
Prerequisite: departmental approval.
Individualized undergraduate research experience.

499R. Senior Honors Thesis. (1–3:0:Arr. ea.)
Prerequisite: topic to be cleared with Honors and Department of Microbiology.

Advanced Undergraduate or Graduate Courses

502. Immunobiology. (4:2:6) Prerequisite: Mbio 402 or equivalent.
Literature review of current topics in immunology.

504. Molecular Biology of Animal Viruses. (4:2:6) Prerequisite: Mbio 404 or equivalent.
Molecular aspects of viral replication and infection.

521. Industrial Microbiology. (3:2:3)
Prerequisite: Mbio 401 and biochemistry.

551. Microbial Physiology. (5:3:6)
Prerequisite: Mbio 401, Chem 481.

561. Radioisotope Methods. (2:1:6)
Prerequisite: college physics.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

601. Molecular Approaches to Microbial Pathogenesis. (2:0:0)

611. Cellular Immunology and Immunogenetics. (2:2:0)

629. Advanced Clinical Laboratory Science. (3:3:0)

631. Molecular Mechanisms in Virology. (2:2:0)

632. Cell and Tissue Culture Techniques. (2:0:6)

642. Molecular Biology of the Cell. (3:3:0)

651R. Special Topics in Microbiology. (1–2:Arr.:Arr. ea.)

652R. Special Topics in Clinical Laboratory Science. (1–2:Arr.:Arr. ea.)

671. Clinical Correlation. (2:1:3)

691R. Graduate Seminar. (1:1:0 ea.)

695R. Research. (1–18:Arr.:Arr. ea.)

699R. Master's Thesis. (1–9:Arr.:Arr. ea.)

799R. Doctoral Dissertation. (1–9:Arr.:Arr. ea.)

Military Science (Army ROTC)

Lieutenant Colonel Robert L. Averett, Chair
(344 ROTC)

Professor of Military Science
Averett, Robert L., LTC (1992) BA, MLS, Brigham Young U., 1975, 1976; MA, Ball State U., 1978; DPA, George Mason U., 1991.

Assistant Professors of Military Science
Lauritzen, Robert D., MAJ (1991) BS, Brigham Young U., 1973; MA, Webster Coll., 1981.
Gibbs, William L., CPT (1990) BS, Brigham Young U., 1982.
Cantrell, Roy R., Jr., CPT (1991) BS, San Francisco State U., 1984.
Rasmussen, Jay M., CPT (1991) BS, U. of Utah, 1983.

The Army ROTC Leadership Excellence Program is designed to produce highly qualified commissioned officers in the U.S. Regular Army, the U.S. Army Reserve, or the U.S. Army National Guard. Students specialize in the major field of their choice

and graduate with the ability to function as a junior executive.

Program Requirements

I. The traditional Army ROTC Leadership Excellence Program extends over a four-year period compatible with normal progression through four years of college. It consists of two phases: a two-year basic course during the freshman and sophomore years and an advanced course designed for completion during the normal junior and senior years. Also included is a six-week advanced camp normally attended in the summer before the senior year. (Under some circumstances it can be attended in the summer at the end of the senior year.) Students may receive credit for the first two years of ROTC by attending the basic camp in the summer before the start of their junior year. Such actions must be approved in advance by the professor of military science.

A two-year program is also offered that enables qualified students (prior service or placement credit for basic course) with 64 semester hours (academic junior) to complete all requirements for a U.S. Army commission in two years of college. Applicants for the two-year program may be upper-division or graduate students, provided a minimum of four semesters remain at BYU at the time of entry into the program. Students must complete a physical examination and other associated requirements during the year before contracting. Two-year students normally process for admission during the first month of the winter semester of the sophomore year and enter the program at the beginning of the junior year.

II. Entering either the four-year or three-year program incurs no military obligation whatever until such time as students sign their advanced course contract at the beginning of the junior year, unless they are an Army ROTC scholarship student. At that time they agree to enlist in the U.S. Army Reserve Control Group for a period of eight years; they are then sworn into the reserve and begin to receive the \$100 monthly subsistence allowance.

Veterans who have had one or more years of active duty may qualify for direct entry into the advanced course by receiving placement credit for the basic course from the professor of military science.

III. Students must be or have applied to be citizens of the United States.

IV. To receive a commission as a second lieutenant in the U.S. Army, students must earn a baccalaureate degree and be commissioned before their thirtieth birthday. Waivers of age may be approved by the Department of the Army under special circumstances. Those who are in a five-year academic program, such as engineering, may complete their Army

ROTC courses at any point before graduation.

V. Upon commissioning, the new second lieutenant is discharged from the U.S. Army Reserve Control Group and incurs an eight-year obligation to the U.S. Army, which may be filled by serving on active duty in the U.S. Army Reserve, National Guard, Individual Ready Reserve (IRR), or various combinations of the above.

VI. Professional Military Education (PME): Before being commissioned, each senior cadet must complete one course in each of the following five categories:

- A. Military history: Hist 321, 323, 381*, PlSc 376, 377.
- B. Human behavior: Psych 111, OrgB 321*, Soc 111, 112, 350, 357, Phil 213.
- C. Writing and reading: Engl 218R, 252, 312, 315, 316*, 317, MCom 320*, Comms 211, 431, Phil 311.
- D. Computer literacy: CS 103, 131, 142, 231, 232, 327, 344, 370, MCom 233, 333, 334, 340.
- E. Mathematics: Math 110, 111, 112, 113, 119, Stat 221, 222, 223, 321, 334, 336, 341, 370, 411.

Note: Courses not specified above may satisfy the requirement but must be approved by the professor of military science.

*Preferred courses.

Suggested Sequence of Courses*

(Two-year students follow the junior and senior schedule)

Basic Course		
Freshman Year	F	W
MilS 120, 121	2	2
Sophomore Year		
MilS 220, 221	3	3
Advanced Course		
Junior Year		
MilS 320, 321	4	4
Senior Year		
MilS 420, 421	4	4

*For each class listed there is a concurrent leadership laboratory required.

Note: Selected courses may be offered during spring term if there is sufficient student demand. Consult the Class Schedule or the course instructor for details.

Minor

Those desiring military science as a minor must complete the Army ROTC courses that qualify for a U.S. Army commission plus 6 additional hours approved by the professor of military science. Apply no later than the beginning of the final year of Army ROTC.

General Information

SMP Program. A program allowing for simultaneous membership in the National Guard or Army Reserve that provides additional pay as an officer trainee is also available.

Textbooks, Uniforms, and Allowances. All textbooks, uniforms, and training materials are furnished by the U.S. Army. Those in the advanced course receive a \$100 monthly allowance (approximately \$2,000 for the two years). Additionally, students attending either the basic or advanced camps receive approximately \$600 for the camp period, plus travel to and from the camp.

Army ROTC Scholarship Program. Full tuition assistance is available on a competitive basis. Senior students in high school may qualify for a four-year scholarship. College students may qualify for a three- or two-year scholarship. The scholarship provides for full tuition, fees, a textbook allowance, and \$100 per month (up to ten months per year) for the period of the scholarship. Contact the Military Science Department for application procedures.

Extracurricular Activities. Army ROTC cadets extend academic and laboratory associations into a variety of extracurricular ROTC activities. Among these are the Mountain Rangers and Ranger Challenge, Drill Team, Army Color Guard, Competitive Rifle Team, annual Patriot Ball, Aviation Club, and the many school service projects performed by the cadet battalion.

LDS Missions. Students, including scholarship recipients, who wish to serve a two-year LDS mission can do so most conveniently between their freshman and sophomore years. This allows students to be on campus during the spring of their sophomore year to facilitate their selection for the advanced course. Interruptions of the program at other times for a mission, however, can be arranged by obtaining individual approval from the professor of military science.

Leadership Laboratory Course Fee. A course fee is required of each participating student to cover cadet activity expenses.

Graduation Requirements in Physical Education. Students in the Army ROTC Program can complete the physical education graduation requirements listed in the Physical Activity Requirement section of this catalog by participating in the leadership laboratory for eight semesters. Additionally, the student is expected to pass the Military Physical Fitness Test. Physical education credit can be received for participation in the ROTC Physical Training Program. The Army ROTC instructor has complete details.

Program of Instruction. The ROTC Leadership Excellence Program is designed to complement the civilian goal of acquiring a baccalaureate degree in a personal course of study while enabling students to develop the knowledge, skills, and attitudes for transition into one of the Army's sixteen branches upon commissioning. The program also enables those who plan a civilian career to fulfill military obligations while serving as an officer. Following the completion of active service, ROTC graduates reflect leadership training as leaders in business, civic, and community affairs.

Military Science (Army ROTC) (MilS)

Undergraduate Courses

115. Spring Lab—Freshmen. (0.5:0:2) Sp

Military basic skills oriented toward in-depth preparation for sophomore year of military science; includes drill and ceremony, physical fitness, land navigation, and basic tactical skill development.

120. Introduction to Leadership Excellence. (2:1:2) F

Historical overview and evolution of value systems and philosophies. Individual leadership styles; organization and time management; writing skills; ethics and code of an officer; role of LDS officer in the military; drill and ceremonies; fire team tactics; rappelling, mountaineering. Lab required. Fee.

121. Individual Leadership Skills. (2:1:2) W

Comparison and analysis of leadership styles in U.S. Army. Army organization, active and reserve forces; winter operations, cross-country skiing, and survival; advanced fire-team and aggressor tactics. Lab required. Fee.

131. Fundamentals of Military Leadership. (3:2:2) F, W, Sp

Alternate single-semester course including course descriptions for MilS 120, 121. Lab required. Fee.

215. Spring Lab—Sophomore. (0.5:0:2) Sp

Military basic skills oriented toward in-depth preparation for junior year of military science and special Army schools such as Airborne, Air Assault, and Winter Warfare Training; includes physical fitness, drill, marksmanship, and patrolling.

220. Advanced Individual Leadership. (3:2:2) F

Building on skills and fundamentals learned in MilS 120, 121; personal leadership and military skills relative to land navigation, military first aid, and preventive medical care and exercises involving tactical training, mountaineering, and other adventure training. Lab required. Fee.

221. Small-Unit Leadership. (3:2:2) W

Organization and leadership of military fire teams and rifle squads, land navigation, squad and platoon tactics, radio/wire communications, and basic first aid. Lab required. Fee.

315. Spring Lab—Juniors. (1:0:2) Sp

Prerequisite to attendance and successful completion of summer advanced camp at Ft. Lewis, Washington; emphasis on small-unit leadership, physical fitness, and land navigation.

320. Organizational Leadership. (4:3:2) F

Theory, practical experience, and diagnostic evaluation in organizational leadership, emphasizing communication, human relations, organizational structures, management, and applied leadership. Lab required. Fee.

321. Battlefield Leadership. (4:3:2) W

Prerequisite to attendance at summer advanced camp, preparing for its successful completion: land navigation, squad and platoon tactics, combat operations, physical fitness, and battlefield leadership. Lab required. Fee.

415. Spring Lab—Seniors. (0.5:0:2)

Instruction, counselling, and communications in preparation for commissioning into the U.S. Army. Students will be assigned as assistant instructors and evaluated on ability to plan, organize, and teach.

420. The Military Profession and Ethics. (4:3:2) F

Preparing the prospective officer for successful completion of first and subsequent assignments in the Army. U.S. Army training management, military writing, administration, logistics, professionalism and ethics. Lab required. Fee.

421. The Profession of Arms. (4:3:2) W

Preparing the prospective officer for successful completion of Army assignments. U.S. advanced Army training management, military justice and law, precommissioning orientation, military briefing skills, and junior officer leadership. Fee.

425R. Ranger Preparation. (2:1:5)

Participation in Army ROTC Ranger Challenge and Mountain Ranger programs. Advanced military training with practical application of skills taught in MILS 120–421.

Music

K. Newell Dayley, Chair (C-550 HFAC)

Professors

Barrus, Clyn D. (1985) Dipl, Vienna Academy of Music, Austria, 1962; MM, DMA, U. of Michigan, 1969, 1971.

Belnap, Parley L. (1965) BA, MA, Brigham Young U., 1950, 1956; DMA, U. of Colorado, 1975.

Bradshaw, Merrill K. (1957) BA, MA, Brigham Young U., 1954, 1955; MM, DMA, U. of Illinois, 1956, 1962.

Dalton, David J. (1963) BM, MM, U. of Rochester, 1959, 1961; DM, Indiana U., Bloomington, 1970.

Dayley, K. Newell (1970) BS, Brigham Young U., 1964; MM, U. of Southern California, 1966; DA, U. of Northern Colorado, 1986.

Drinkall, Roger (1989) BM, Curtis Inst. of Music, 1959; MM, U. of Illinois, 1962.

Durham, Thomas L. (1978) BM, MM, U. of Utah, 1974, 1975; PhD, U. of Iowa, 1978.

Gotkovsky, Nell (1990) Dipl, Paris National Conservatory, France, 1960.

Mason, James A., Dean (1957) BA, MA, Brigham Young U., 1955, 1957; EdD, Arizona State U., 1970.

Pollei, Paul C. (1963) BM, U. of Utah, 1961; MM, U. of Rochester, 1962; PhD, Florida State U., 1975.

Powley, E. Harrison (1969) BM, MA, PhD, U. of Rochester, 1965, 1968, 1974.

Pratt, Rosalie Rebollo (1979) BM, Manhattanville Coll., 1954; MM, Rosary Coll., 1955; EdD, Columbia U., 1976.

Randall, David M. (1970) BS, Brigham Young U., 1965; MM, Indiana U., Bloomington, 1967; DMA, U. of Iowa, 1970.

Robison, Clayne W. (1973) BA, Brigham Young U., 1962; JD, Harvard U., 1965; BA, Brigham Young U., 1970; MM, DMA, U. of Washington, 1971, 1973.

Sargent, David H. (1976) BA, MA, Brigham Young U., 1966, 1968; MM, DMA, U. of Illinois, 1969, 1975.

Staheli, Ronald J. (1978) BA, Brigham Young U., 1972; MM, DMA, U. of Southern California, 1973, 1977.

Stuart-Bachelder, Lila R. (1986) BM, U. of Utah, 1964; MM, DMA, Indiana U., 1968, 1993.

Westwood, Shirley, A. (1989) BM, U. of Kansas, 1956; MM, DMA, U. of Missouri, Kansas City, 1969, 1980.

Williams, Glenn R. (1965) BA, Brigham Young U., 1953; MM, DMA, U. of Rochester, 1954, 1961.

Associate Professors

Bachelder, Daniel F. (1975) BM, U. of Montana, 1961; MM, U. of Idaho, 1965; PhD, Brigham Young U., 1976.

Blackinton, David P. (1980) BM, MM, U. of Michigan, 1964, 1966; DMA, Catholic U. of America, 1975.

Bush, Douglas E. (1978) BA, MM, Brigham Young U., 1972, 1974; PhD, U. of Texas, 1982.

Hicks, Michael D. (1985) BM, Brigham Young U., 1980; MM, DMA, U. of Illinois, 1981, 1984.

Hopkin, J. Arden (1990) BM, Brigham Young U., 1971; MM, North Texas State U., 1974; DMA, U. of Rochester, 1978.

Jessop, Scott Gordon (1980) BS, MS, Utah State U., 1961, 1964; EdS, U. of Utah, 1973; PhD, Brigham Young U., 1980.

Kenney, Susan Hobson (1977) BS, U. of Utah, 1966; MA, Brigham Young U., 1978.

Shumway, Jeffrey L. (1985) BM, Brigham Young U., 1976; MM, Juilliard School of Music, 1977; D.M., Indiana U., 1982.

Smith, C. Raymond (1982) BM, Brigham Young U., 1975; MM, DM, Indiana U., 1976, 1982.

Wilberg, Mack J. (1984) BM, Brigham Young U., 1979; MM, DMA, U. of Southern California, 1981, 1985.

Assistant Professors

Anderson, Richard Paul (1972) BA, Arizona State U., 1968; MM, Northwestern U., 1970; DMA, U. of Colorado, 1986.

Bean, Matthew W. (1991) BA, Brigham Young U., 1983; MM, Manhattan School of Music, 1985; DMA, Indiana U., 1991.

Boss, Jack F. (1992) BM, MM, Ohio State U., 1979, 1981; PhD, Yale U., 1991.

Brough, Ronald P. (1984) BM, MM, North Texas State U., 1981, 1983.

Cook, R. Donald (1991) BM, MM, Brigham Young U., 1980, 1982; DMA, U. of Kansas, 1987.

Giovannetti, GERALYN (1990) BM, MM, U. of Western Ontario, 1978, 1980; DMA, U. of Michigan, 1990.

Johnson, Steven P. (1987) BA, MA, California State U., Fullerton; 1976, 1979; PhD, U. of California, Los Angeles, 1989.

Jones, Stephen M. (1991) BM, Brigham Young U., 1983; MM, DMA, U. of Cincinnati, 1986, 1989.

Peterson, Donald L. (1986) BM, MA, Brigham Young U., 1976, 1983; DMA, Arizona State U., 1986.

Smith, Robert Bailly (1967) BA, MA, Brigham Young U., 1957, 1967.

Instructors

Boothe, Randall W. (1982) BA, Brigham Young U.—Hawaii, 1975; MA, Brigham Young U., 1979.

Call, R. Steven (1991) BM, MM, Utah State U., 1971, 1975.

Conkling, Susan W. (1991) BME, Illinois Wesleyan U., 1981; MM, U. of Rochester, 1989.

Hill, C. Houston (1991) BM, MM, U. of Texas, Austin, 1973, 1988.

Huffman, Mark P. (1985) BM, MA, Brigham Young U., 1983, 1985.

Rytting, Bryce (1989) BS, U. of Utah, 1977; MFA, Princeton U., 1986.

Emeriti

Arbizu, Ray L. (1970) BA, MA, Arizona State U., 1952, 1955.

Bos, Jacob (1953).

Curtis, Brandt B. (1955) BA, Brigham Young U., 1953; MM, DMA, Indiana U., Bloomington, 1955, 1978.

Downs, Robert H. (1966) BM, MM, U. of Missouri, Kansas City, 1957, 1957.

Earl, Don L. (1946) BA, MA, Brigham Young U., 1940, 1947; PhD, Indiana U., Bloomington, 1952.

Gibbons, Rendol L. (1964) BA, MA, Arizona State Coll., 1947, 1954; PhD, U. of Colorado, 1969.

- Goodman, A. Harold (1960) BA, U. of Arizona, 1947; MM, EdD, U. of Southern California, 1951, 1960.
- Harris, H. Jarolde (1970) BM, Bethany Coll., 1950; MM, Northwestern U., 1954.
- Hatton, Gaylen A. (1979) BA, MA, Brigham Young U., 1951, 1954; PhD, U. of Utah, 1964.
- Kalt, Percy G. (1966) BS, U. of Utah, 1957; Dipl., Staatliche Hochschule für Musik, Stuttgart, Germany, 1963; MM, U. of Utah, 1968; DMA, U. of Michigan, 1973.
- Keeler, Joseph J. (1953) BS, MS, Brigham Young U., 1940, 1950.
- Laycock, Harold R. (1949) BA, MA, Brigham Young U., 1937, 1947; DMA, U. of Southern California, 1961.
- Laycock, Ralph G. (1953) BA, Brigham Young U., 1941; MS, Juilliard School of Music, 1948; DMA, U. of Southern California, 1970.
- Manookin, Robert P. (1959) BA, Brigham Young U., 1955; MM, U. of Illinois, 1959; PhD, U. of Utah, 1967.
- Nibley, Reid N. (1969) BFA, MA, U. of Utah, 1950, 1953; DMA, U. of Michigan, 1964.
- Nordgren, Quentin R. (1955) BA, MA, Brigham Young U., 1942, 1950; PhD, Indiana U., Bloomington, 1955.
- Ripplinger, Donald H. (1975) BA, Brigham Young U., 1954; MS, PhD, U. of Utah, 1965, 1968.
- Sardoni, Lawrence W. (1946) BA, MA, Brigham Young U., 1935, 1946.
- Stubbs, Darrel W. (1962) BM, U. of Rochester, 1949; MM, Indiana U., Bloomington, 1952; DMA, U. of Southern California, 1966.
- Terry, Elvis B. (1957).
- Webb, Fredrick N. (1948) BA, MA, Brigham Young U., 1933, 1954.
- Woodward, Ralph (1955) BS, U. of Idaho, 1940; MM, Cincinnati Conservatory, 1948; DMA, U. of Illinois, 1964.

Programs and Degrees

BA	Music
BFA	Music Dance Theatre
BM	Composition
BM	Music Education
BM	Performance and Pedagogy
BA, BM	Honors in Music and University Honors
MA, MM, PhD	Music

The music major may pursue a broad liberal education with a concentration in music or specialize in an area such as composition, performance, or teaching. Those who successfully complete an undergraduate degree are prepared to obtain a number of professional positions within the field of music or to continue study on the graduate level. Because the music curriculum is rigorous, it is an excellent preprofessional course of study for those interested in fields such as arts administration, business, law, librarianship, the music industry, music journalism, and music therapy.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Music

I. Prerequisite: Enrollment as a prospective music major requires that the student pass (a) an audition in his or her performance specialty (voice or instrument), (b) an aural acuity test, and (c) a music fundamentals test. *These must be passed before the first day of freshman classes* (see department office for details).

II. File established in the College of Fine Arts and Communications Advisement Center (D-444 HFAC) during first semester of enrollment.

III. Participation in Freshman Seminar during second semester of enrollment.

IV. Major core courses (45 credit hours): Music 149R (eight P grades)*, 191, 192, 193, 194, 195, 196, 197, 198**, 235; 260R (8 hours), or 161 and 260R (6 hours) for voice***; 291, 292, 293, 294, 295, 296, 297, 298; 4 hours of performance ensemble as assigned by faculty; 301, 302, 303, 304, 395.

*Students transferring from other institutions or completing all requirements in fewer than eight semesters may petition for a waiver of remaining Music 149R credits.

**Students who pass the AP Music Test with at least a score of 4 can be excused from Music 191, 193, 195, 197 and receive 5 hours of credit. However, if they have received insufficient keyboard or sight singing instruction they are encouraged to enroll in Music 191 and 197.

***All 260R enrollments must be in same instrument or all in voice.

V. Jury examination to assess proficiency and progress on the major instrument or voice. Music majors are required to complete an examination before a faculty jury on their major instrument or voice near the end of each semester of performance study. Students may elect to substitute a recital for a jury examination, subject to faculty approval. Students desiring to enter Music 360R or 460R, which normally follows successful completion of the sophomore year, must first be granted approval by a faculty jury. Instrumental, keyboard, and vocal proficiency requirements may be found in the *Music Handbook*, available at the Bookstore.

VI. No credit less than C- in music courses can be applied toward the music degree or fulfillment of prerequisites.

VII. Official acceptance into specific degree program. See advisement center (D-444 HFAC) for application procedure.

Course Sequence

A suggested sequence of courses for each degree program is available from the College of Fine Arts and Communications Advisement Center (D-444 HFAC).

BA Music

The bachelor of arts degree offers a broad liberal arts education with a concentration in music. If appropriate music electives are chosen, it also offers excellent preparation for a variety of professional music careers and graduate work in theory, musicology, or music education. To incorporate an emphasis into elective course work, students should seek assistance as follows:

I. Electives focused on preparation for graduate studies in musicology or librarianship: Consult with the head of the music history and literature area.

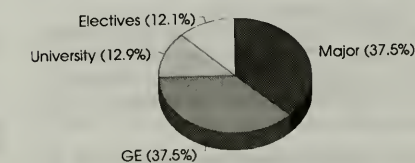
II. Electives focused toward sound recording technology, music composition for the media, or the music industry: Consult with the head of the media music area.

III. Electives focused on preparation for graduate studies in music theory: Consult with the head of the composition-theory area.

IV. Electives focused on preparation for graduate studies in music education: consult with head of music education area.

Required in addition to the major core courses above: Senior thesis (Music 498, 3 hours).

Summary of Degree Requirements for BA Music



1. Total hours	128.0
2. Major hours*	48.0
3. General Education requirements	48.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	15.5
6. 40 hours upper-division GPA requirement of 2.0	

7. Estimated semesters to graduate
13 hours per semester 10.0
16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BFA Music Dance Theatre

The BFA in music dance theatre is an interdisciplinary degree offered by the College of Fine Arts and Communications through the cooperative involvement of its Department of Music and Department of Theatre and Film and the College of Physical Education's Department of Dance.

I. Application and audition for acceptance into the program during first semester of registration.

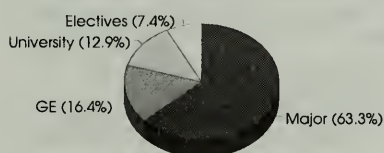
II. Music 113, 161, 186, 260R (6 hours), 261, 290, 360R (6 hours), 361, in lieu of above music core requirements.

III. Dance 131, 134R, 135, 231, 235, 240R, 242, 290, 291R, 340R, 361, 362, 363, 390R.

IV. ThF 121, 122, 123, 124R, 127R, 323R, 361, 522R; one from ThF 324R, 423R, 424R, 523R, 524R.

V. MDT Seminar (Music 228, Dance 228, ThF 228), History of Music Dance Theatre (Music 300, Dance 300, ThF 300), MDT Senior Performance Project (Music 426R, Dance 426R, ThF 426R); required involvement in Music 319R, Dance 229R/429R, ThF 240R/540R (3 hours) and ThF 399R, Music 399R, or Dance 399R (1 hour).

Summary of Degree Requirements for BFA Music Dance Theatre



1. Total hours 128.0
2. Major hours ♦ 81.0
3. General Education requirements 21.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 0.0
 - Advanced Math/Foreign Language 0.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 9.5
6. 40 hours upper-division
- GPA requirement of 2.0

7. Estimated semesters to graduate
13 hours per semester 10.0
16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BM Composition

This degree program prepares the student for graduate study in composition and theory or may lead to a professional career as a composer, arranger, or orchestrator.

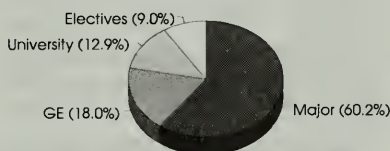
I. In addition to above music core requirements: Music 188, 287, 288, 387R (8 hours), 481, 483, 581, 583, 4 hours of ensemble, 6 hours of music electives.

II. Pass a junior-level screening process by creating a portfolio of acceptable compositions.

III. Complete 8 hours of Music 260R and achieve proficiency level for entry to 360R.

IV. Present a senior composition recital.

Summary of Degree Requirements for BM Composition



1. Total hours 128.0
2. Major hours ♦ 77.0
3. General Education requirements 23.0
 - Core 15.0
 - First-Year Writing 5.0
 - Arts and Sciences electives 3.0
 - Advanced Math/Foreign Language 0.0
 - Advanced Writing 0.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 11.5
6. 40 hours upper-division
- GPA requirement of 2.0
7. Estimated semesters to graduate
13 hours per semester 10.0
16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

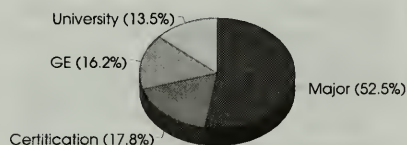
BM Music Education

A degree in music education prepares the student for K–12 certification as a public school music teacher with either a choral or an instrumental emphasis. The degree program is a composite of music and education. Graduates may obtain a teaching position, pursue graduate work, or use the degree as professional preparation for other fields of endeavor.

I. **Choral Emphasis.** Complete the following in addition to above music core requirements:

- A. Music courses: Music 162, 261, 262 or 263; 276, 360R (4 hours), 376A,B, 483; 3 hours of ensemble.
- B. Certification courses: ScEd 276R, 351, 376R, 476R; Hlth 362; ScEd 326; RelC 491, 492.

Summary of Degree Requirements for Choral Emphasis



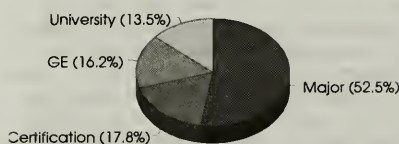
1. Total hours 129.5
2. Major hours ♦ 68.0
3. Teacher certification requirements ♦ 23.0
4. General Education requirements 21.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 3.0
 - Advanced Math/Foreign Language 0.0
 - Advanced Writing 0.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division
- GPA requirement of 2.85
8. Estimated semesters to graduate
13 hours per semester 10.0
16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

II. **Instrumental Emphasis.** Complete the following in addition to above music core requirements:

- A. Music courses: Music 276, 360R (4 hours), 372A,B, 373A,B, 374, 375A,B, 377A,B; 3 hours of ensemble.
- B. Certification courses: ScEd 276R, 351, 376R, 476R, Hlth 362; ScEd 326; RelC 491, 492.

Summary of Degree Requirements for Instrumental Emphasis



1. Total hours 129.5
2. Major hours[♦] 68.0
3. Teacher certification requirements[♦] 23.0
4. General Education requirements 21.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 3.0
 - Advanced Math/Foreign Language 0.0
 - Advanced Writing 0.0
5. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
6. Elective hours 0.0
7. 40 hours upper-division
GPA requirement of 2.85
8. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
9. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

[♦]**Note:** Hours do not include any course that could be used to fill GE or university requirements.

III. Proficiencies: All Music 260R and 360R proficiency requirements in voice or a woodwind, brass, string, or percussion instrument must be completed before student teaching (ScEd 476R). Twenty minutes of solo recital time and ten minutes of chamber music recital time is required. Students opting for a juried recital must register for Music 349R.

IV. *Music education majors must perform in a large ensemble each semester of enrollment, except during the semester of student teaching. One semester of marching band is also required for those who play woodwind, brass, or percussion instruments.*

V. A minimum GPA of 2.85 must be maintained in all university course work.

A combined emphasis in elementary music education and elementary education prepares the student for dual certification as an elementary music specialist and as an elementary classroom teacher. Graduates may obtain a teaching position in either area or a combination of both, pursue graduate work, or use the degree as preparation for other fields of endeavor.

VI. **Music Education: Elementary.** For dual certification as an elementary music specialist and an elementary classroom

teacher, the following must be completed in addition to above core requirements:

- A. Music courses: Music 161, 162, 271, 272, 371, 376B, 471.

Note: Music 260R credit, as part of the music core, must be in voice and therefore preceded by Music 161.

- B. Certification courses: ELdr 452; EIEd 310R, 340, 350, 351, 352, 353, 354, 355, 360, 370, 400; Hlth 361; IS 286, 376R; RelC 491, 492.

Summary of Degree Requirements for Music Education: Elementary



1. Total hours 163.5
2. Major and certification requirements[♦] 125.0
3. General Education requirements 21.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 3.0
 - Advanced Math/Foreign Language 0.0
 - Advanced Writing 0.0
4. University requirements 17.5
 - Religion 14.0
 - PE/Health 3.5
5. Elective hours 0.0
6. 40 hours upper-division
GPA requirement of 2.85
7. Estimated semesters to graduate
 - 13 hours per semester 12.5
 - 16 hours per semester 10.5
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

[♦]**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Note: A suggested sequence of courses, including supporting courses that meet General Education and university requirements, is available from the head of the music education area.

BM Performance and Pedagogy

Those who complete the requirements for the performance and pedagogy degree are prepared for professional work as a performer, a studio teacher, or a combination of both. Some will pursue advanced work on the graduate level to prepare for a performance career or college teaching.

- I. In addition to above music core requirements: Present a juried recital (Music 249R) during the sophomore year, or, for

voice majors, successfully complete an extended jury examination in lieu of the recital. A senior recital (Music 449R) is required of all performance and pedagogy majors. Additional performance requirements at the sophomore, junior, and senior level differ by area of emphasis (see sections IV, V, or VI below).

Recital: Enroll in 249R, 349R, or 449R (0 credit hours) for the semester during which a recital is to be presented. A fee of \$20 is assessed for program preparation and printing. A prerecital hearing is required at least three weeks before juried recitals. See the scheduling secretary in C-550 HFAC for further information.

Note: In conjunction with the senior recital, students may qualify for the Performer's Certificate in recognition of superior performance skill and musical maturity.

II. *All performance and pedagogy majors must perform in a large ensemble each semester of enrollment.* Those in the keyboard emphasis may apply 4 credit hours of Music 344R toward this requirement.

III. Completion of ScEd 376R (1 hour) and Music 470R (2 hours).

IV. Keyboard Emphasis—complete one of three tracks:

- A. *Piano:* Music 115, 116R, or 260R in organ (4 hours), 264, 265, 344R (2 hours), 360R (4 hours), 364, 365, 403A,B, 460R (8 hours), music electives (8 hours).
- B. *Organ:* Music 166, 264, 265, 344R (2 hours), 360R (4 hours), 364, 366, 404A,B, 460R (8 hours), 466R, music electives (8 hours).
- C. *Dual Emphasis in Piano and Organ:* Music 166, 264, 265, 344R (2 hours), 360R (8 hours), 364, 365, 366, choice of 6 hours from 403A,B and 404A,B, 466R, music electives (8 hours).

Note: Performance study (Music 260R, 360R) must be divided between piano and organ.

V. Orchestral Instruments Emphasis—complete one of four tracks:

- A. *Woodwinds:* Music 331R or 348R (4 hours), 349R, 367, 405, 407, 460R (16 hours), music electives (10 hours).
- B. *Brasses:* Music 331R or 341R (4 hours), 349R, 368, 405, 407, 460R (16 hours), music electives (10 hours).
- C. *Percussion:* Music 330R, 331R, or 345R (5 hours), 349R, 374, 405, 407, 460R (16 hours), music electives (10 hours).
- D. *Strings:* Music 343R or 346R (4 hours), 349R, 369, 405 or 407, 406, 460R (16 hours), music electives (10 hours).

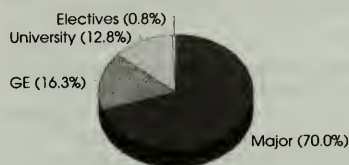
VI. Voice Emphasis: Music 162, 262, 263, 360R (8 hours), 363, 402A, language (8 hours of French, German, or Italian), music or language electives (12 hours).

Note 1: Students intending to enter graduate school in voice performance or

pedagogy should complete Music 402B, Fren 101, Germ 101, and Ital 101.

Note 2: Required electives for each emphasis may be focused in a secondary area of study if desired. Suggested elective sequences are available in the College of Fine Arts and Communications Advisement Center (D-444 HFAC).

Summary of Degree Requirements for BM Performance and Pedagogy



1. Total hours	129.5
2. Major hours ♦	92.0
3. General Education requirements	21.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	3.0
Advanced Math/Foreign	
Language	0.0
Advanced Writing	0.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0–2.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BA and BM with Honors in Music and University Honors

- I. Honors Program requirements: University Honors graduation requirements as listed in Honors Education section of this catalog.
- II. Honors major requirements:
 - A. Courses chosen to meet GE and religion requirements must include Phil 105, 214, Dance 164, Phscs 167, Psych 201, RelC 491, 492 (Senior Seminar—Music).
 - B. Within Honors independent reading requirement, a subsection must be devoted to important works in music.
 - C. Honors thesis on topic in major (Music 499R, 3 hours minimum) and oral defense of thesis.

Music Minor

Complete 18 credit hours including Music 101, 135, 160R (2 hours), 190, 4 hours of ensemble, 5 hours of music electives. The

Department of Music does not offer a music minor leading to a secondary teaching certificate.

Music Minor—Elementary Education

This is a nonteaching minor for elementary education majors. Music 111 or 160R (2 hours—voice); 113 or 160R (2 hours—piano); 2 hours of choral ensemble; 190; 271; 272, 371, or 471.

Music (Music)

Undergraduate Courses

A course without the R suffix may not be repeated more than one time to improve a grade. (Repeating a course with the R suffix does not change the original grade.)

101. Introduction to Music. (3:3:0) F, W, Sp, Su Honors also.

Designed to aid nonmusic majors in developing skills needed for listening to music creatively. Emphasis on masterworks of Western music from major style periods.

111. Basic Vocal Skills. (2:2:0) F, W, Sp
Class instruction in voice for nonmusic majors.

112R. Vocal Techniques and Literature. (2:2:0 ea.) On dem. Prerequisite: Music 111 or instructor's consent.
Continuation of Music 111.

113. Basic Piano Skills. (2:2:0) F, W, Sp
Class instruction in piano for nonmusic majors.

114R. Piano Techniques and Literature. (2:2:0 ea.) F, W, Sp Prerequisite: Music 113 or instructor's consent.
Continuation of Music 113.

115. Basic Organ Skills. (2:2:0) F, W, Sp
Class instruction in organ for nonmusic majors.

116R. Organ Techniques and Literature. (2:2:0 ea.) F, W, Sp Prerequisite: Music 115 or instructor's consent.
Continuation of Music 115.

117. Basic Guitar Skills. (2:2:0) F, W, Sp, Su
Class instruction in guitar for nonmusic majors.

118R. Guitar Techniques and Literature. (2:2:0 ea.) F, W Prerequisite: Music 117 or instructor's consent.
Continuation of Music 117.

135. Basic Conducting. (2:2:0) F, W
Fundamental concepts and skills for nonmusic majors.

149R. Concerts and Lectures. (0:Arr.:Arr. ea.) F, W, Sp
Concert and lecture attendance requirement for all music majors.

160R. Performance Study. (0–1:0.5:0 ea.) F, W, Sp Prerequisite: nonmusic major status. Audition may be required.

Private or semiprivate instruction. One to two hours of daily practice. Fee.

161. Voice Technique. (2:2:1) F Prerequisite: acceptance as a prospective music major, entrance audition.

Class instruction in voice technique.

162. Diction 1. (1:1:1) W Prerequisite: concurrent registration in 260R.
Recommended: concurrent registration in Ital 101.

English, Italian, and Latin diction for singers.

166. Organ Registration. (2:2:0) F, Alt. Sp Prerequisite: concurrent private or group instruction in organ or instructor's consent.
Organ stops and their application to various performance styles.

186. Songwriting 1. (2:2:0) F, W Prerequisite: basic music reading and keyboard skills.
Songwriting for present-day publishing industry; basic song writing theory; form, content, and style.

188. Composition 1. (2:2:0) W Prerequisite: Music 191, 193, 195, 197.

Introduction to principles of recent art music; composition and performance of student works for one to five instruments.

190. Music Fundamentals. (2:2:0) F, W Prerequisite: nonmusic major status.
Required for music minor.

Organizational systems of music, their notation and aural patterns.

191. Keyboard Harmony 1. (0.5:0:1) F, Sp Prerequisite: acceptance as a prospective music major; concurrent registration in Music 193, 195, and the *same* section of Music 197. Music 113 or 114R may be required if keyboard skills are insufficient.

Basic keyboard harmony skills and application of theoretical concepts learned in Music 195.

192. Keyboard Harmony 2. (0.5:0:1) W, Su Prerequisite: Music 191, 193, 195, 197; concurrent registration in Music 194, 196, and *same* section of 198.
Continuation of Music 191.

193. Dictation 1. (1:0:2) F, Sp Prerequisite: acceptance as a prospective music major; concurrent registration in Music 191, 197, and *same* section of 195.

Development of aural skills through melodic, rhythmic, and harmonic dictation.

194. Dictation 2. (1:0:2) W, Su Prerequisite: Music 191, 193, 195, 197; concurrent registration in Music 192, 198, and *same* section of 196.

Continuation of Music 193.

195. Music Theory 1. (3:3:0) F, Sp
Prerequisite: acceptance as a prospective music major; concurrent registration in Music 191, 197, and *same* section of 193.
Writing and analysis in diatonic harmony.

196. Music Theory 2. (3:3:0) W, Su
Prerequisite: Music 191, 193, 195, 197; concurrent registration in 192, 198, and *same* section of 194.

Part-writing and analysis in diatonic and chromatic harmony.

197. Sight Singing 1. (0.5:0:1) F, Sp
Prerequisite: acceptance as a prospective music major; concurrent registration in Music 193, 195, and *same* section of 191.

Rhythm and pitch-reading skills using two systems of counting and melodic solfeggio singing with hand signs.

198. Sight Singing 2. (0.5:0:1) W, Su
Prerequisite: Music 191, 193, 195, 197; concurrent registration in Music 194, 196, and *same* section of 192.

Continuation of Music 197.

200. Elements of Music. (1:1:0) F, W, Sp
Prerequisite: nonmusic major status and concurrent ensemble enrollment.

Exploration of basic musical processes, structures, styles, and common principles of music literature through lectures, demonstrations, and analytical experiences.

201. History of Civilization: Music 1. (3:3:0) F Honors also. Prerequisite: ability to read musical notation.

Civilization from Greek antiquity to Renaissance, primarily from perspective of musical literature and the arts; exploring fundamental questions in human experience; examining formative events in history; understanding value of important texts.

202. History of Civilization: Music 2. (3:3:0) W Honors also. Prerequisite: Music 201.

Civilization from baroque to present, primarily from perspective of musical literature and the arts; exploring fundamental questions in human experience; examining formative events in history; understanding value of important texts.

203. World Music Cultures. (3:3:0) F, W
Traditional music of selected cultures of Asia, Oceania, Africa, Europe, and the Americas, including both folk and art music traditions.

228. Music Dance Theatre Seminar. (1:2:0) F
Prerequisite: audition and concurrent registration in ThF 228, Dance 228.

Intensive integration of music, dance, and theatre for the performer.

235. Conducting Techniques. (2:2:0) F, W, Sp
Prerequisite: music major status, C– or higher in Music 192, 194, 196, 198.

Physical techniques and musical understanding required to conduct a performance ensemble.

249R. Sophomore Recital. (0:Arr.:Arr. ea.) F, W, Sp Prerequisite: concurrent registration in Music 260R and instructor's consent.

Prerecital hearing required at least three weeks before juried recitals. Fee.

251. Audio: Basic Principles. (2:2:2) F, W
Prerequisite: Phscs 167 or instructor's consent; nonmusic major status.

Introduction to sound recording and reinforcement systems, including theatre sound. Emphasis on basic operational principles and procedures.

253. Audio Electronics 1. (2:2:2) F
Prerequisite: Math 110, Phscs 167.

Basic DC and AC circuits, emphasizing applications in audio.

254. Audio Electronics 2. (2:2:0) W
Prerequisite: Music 253.

Continuation of Music 253.

260R. Performance Study. (1–2:1:1 ea.) F, W, Sp Prerequisite: acceptance as a prospective music major or music major, audition.

Private instruction and studio class. One to three hours of daily practice. Fee.

261. Contemporary Vocal Techniques. (2:2:1) W Prerequisite: Music 161 or instructor's consent.

Contemporary vocal styles and techniques, including pop/belt, stage, and studio singing.

262. Diction 2. (1:1:1) W Prerequisite: Music 162 and concurrent registration in Music 260R or 360R. Recommended: concurrent registration in Germ 101.

German diction for singers.

263. Diction 3. (1:1:1) F Prerequisite: Music 162 and concurrent registration in Music 260R or 360R. Recommended: concurrent registration in Fren 101.

French diction for singers.

264. Keyboard Foundations 1. (2:2:0) F
Prerequisite: Music 192, 194, 196, 198, 260R.

Sight-reading, harmonization, improvisation, and technique at the keyboard.

265. Keyboard Foundations 2. (2:2:0) W
Prerequisite: Music 264.

Continuation of Music 264.

271. K–6 Music Methods 1. (2:2:0) F

Methods and materials for teaching music to children; including Dalcroze, Orff, and Kodaly.

272. Music Listening Skills. (2:2:0) W odd yr.

Strategies for exploring and organizing musical sounds in the elementary classroom. Includes survey of music literature appropriate for developing listening skills and awareness with children.

276. General Music Methods. (3:3:0) W
Prerequisite: Music 192, 194, 196, 198, ScEd 276R.

Methods and materials for teaching general music, K–12. Cognitive development and learning styles as a basis for instructional strategies. Includes Dalcroze, Orff, and Kodaly.

284. Jazz Improvisation 1. (2:2:1) F, W
Prerequisite: Music 192, 194, 196, 198, or instructor's consent.

Beginning improvisation: theory and technique.

287. Composition 2. (2:2:1) F Prerequisite: Music 188, 192, 194, 196, 198.

Electronic music composition, analog and digital synthesis, and computer-aided composition and score preparation.

288. Composition 3. (2:1:2) W Prerequisite: Music 287, 291, 293, 295, 297.

Invention and exploration of sound, control of multivoiced textures and larger forms, and recent twentieth-century art music.

290. Music Theory for MDT Majors. (4:3:2) W Prerequisite: Music 113 and 186 or equivalent, Music Dance Theatre (MDT) major status.

Music theory, sight singing, aural dictation, and keyboard harmony.

291. Keyboard Harmony 3. (0.5:0:1) F, Sp
Prerequisite: Music 192, 194, 196, 198; concurrent registration in Music 293, 295, and *same* section of 297.

Continuation of Music 192.

292. Keyboard Harmony 4. (0.5:0:1) W, Su
Prerequisite: Music 291, 293, 295, 297; concurrent registration in Music 294, 296, and *same* section of Music 298.

Continuation of Music 291.

293. Dictation 3. (1:0:2) F, Sp Prerequisite: Music 192, 194, 196, 198; concurrent registration in Music 291, 297, and *same* section of 295.

Continuation of Music 194.

294. Dictation 4. (1:0:2) W, Su Prerequisite: Music 291, 293, 295, 297; concurrent registration in Music 292, 298, and *same* section of Music 296.

Continuation of Music 293.

295. Music Theory 3. (3:3:0) F, Sp
Prerequisite: Music 192, 194, 196, 198; concurrent registration in Music 291, 297, and *same* section of 293.

Extended chromatic techniques and introduction to twentieth-century concepts.

296. Music Theory 4. (3:3:0) W, Su
Prerequisite: Music 291, 293, 295, 297; concurrent registration in Music 292, 298, and *same* section of 294.

Set theory, serialism, and late twentieth-century concepts.

297. Sight Singing 3. (0.5:0:1) F, Sp
Prerequisite: Music 192, 194, 196, 198;
concurrent registration in Music 293, 295, and
same section of 291.

Continuation of Music 198.

298. Sight Singing 4. (0.5:0:1) W, Su
Prerequisite: Music 291, 293, 295, 297;
concurrent registration in Music 294, 296, and
same section of 292.

Continuation of Music 297.

300. History of Music Dance Theatre. (1:3:0)
F even yr. Prerequisite: concurrent
registration in Dance 300, ThF 300.

Development of Western theatre tradition
from antiquity to present, emphasizing union
of music, dance, and theatre.

301. Survey of Music Literature 1. (2:2:0) F,
Sp Prerequisite: Music 192, 194, 196, 198, or
instructor's consent.

Survey of musical genres, forms, styles,
and performance practices from antiquity
through the Renaissance.

302. Survey of Music Literature 2. (2:2:0) W,
Su Prerequisite: Music 192, 194, 196, 198, or
instructor's consent.

Survey of musical genres, forms, styles,
and performance practices from the baroque
through the early classic.

303. Survey of Music Literature 3. (2:2:0) F,
Sp Prerequisite: Music 292, 294, 296, 298, or
instructor's consent.

Survey of music genres, forms, styles, and
performance practices from the high classic
through the romantic.

304. Survey of Music Literature 4. (2:2:0) W,
Su Prerequisite: Music 292, 294, 296, 298, or
instructor's consent.

Survey of musical genres, forms, styles,
and performance practices of the twentieth
century.

311R. University Chorale. (1:0:3 ea.) F, W, Sp
No audition required.

312R. Men's Chorus. (1:0:5 ea.) F, W
Prerequisite: audition and consent of director.

313R. Women's Chorus. (1:0:5 ea.) F, W
Prerequisite: audition and consent of director.

314R. Concert Choir. (1:0:5 ea.) F, W
Prerequisite: audition and consent of director.

315R. University Singers. (1:0:5 ea.) F, W
Prerequisite: audition and consent of director.

318R. Music Theatre Ensemble. (1:0:5 ea.) F,
W, Sp Prerequisite: audition and consent of
director.

Auditioned chorus or orchestra for opera
or music dance theatre productions.

319R. Music Theatre Performance. (1–3:0:0
ea.) F, W, Sp Prerequisite: audition and
consent of director.

Participation as soloists, coaches, or
directors in music dance theatre or opera
performances.

323R. Marching Band. (1:0:6 ea.) F
Prerequisite: audition or consent of director.

324R. Cougar Band. (1:0:6 ea.) W
Prerequisite: audition or consent of director.

325R. Symphonic Band. (1:0:4 ea.) F, W, Sp
Prerequisite: audition.

326R. Wind Symphony. (1:0:4 ea.) F, W
Prerequisite: audition.

329R. Folk Ensemble. (1:0:4 ea.) F, W
Prerequisite: consent of director.
Traditional Bluegrass ensemble. Performs
with BYU International Folk Dancers.

330R. Steel Band. (1:0:2 ea.) F, W Prerequisite:
consent of director.

331R. Jazz Combos. (1:1:2 ea.) F, W, Sp
Prerequisite: audition.

332R. Show Band. (1:0:6 ea.) F, W
Prerequisite: audition.
Contemporary and traditional show music
(Young Ambassadors) and ethnic music
(Lamanite Generation).

333R. Jazz Ensemble. (1:0:4 ea.) F, W, Sp
Prerequisite: audition.

334R. Synthesis. (1:0:4 ea.) F, W Prerequisite:
audition.

337R. Symphony Orchestra. (1:0:4 ea.) F, W,
Sp Prerequisite: audition.

338R. Philharmonic Orchestra. (1:0:4 ea.) F,
W Prerequisite: audition.

339R. Chamber Orchestra. (1:0:2 ea.) F, W
Prerequisite: audition.

341R. Brass Chamber Music. (1:1:2 ea.) F, W,
Sp Prerequisite: consent of director.

342R. Early Music Ensemble. (1:1:3 ea.) F, W
Prerequisite: consent of director.

343R. Guitar Ensemble. (1:1:2 ea.) F, W
Prerequisite: consent of director.

344R. Keyboard in Ensemble. (1:0:3 ea.) F, W,
Sp Prerequisite: Music 260R and instructor's
consent.

Accompanying and ensemble
performance.

345R. Percussion Ensemble. (1:0:2 ea.) F, W,
Sp Prerequisite: consent of director.

346R. String Chamber Music. (1:1:2 ea.) F, W,
Sp Prerequisite: consent of director.

347R. Vocal Chamber Music. (1:1:2 ea.) F, W
Prerequisite: consent of director.

348R. Woodwind Chamber Music. (1:1:2 ea.)
F, W, Sp Prerequisite: consent of director.

349R. Junior Recital. (0:Arr.:Arr. ea.) F, W, Sp
Prerequisite: concurrent registration in Music
360R or 460R and instructor's consent.
Prerecital hearing required at least three
weeks before juried recitals. Fee.

353. Recording Studio 1. (2:2:2) F
Prerequisite: Math110, Phscs 167, and music
major status or instructor's consent.
Basic recording theory, operational
techniques, and procedures.

354. Recording Studio 2. (2:2:2) W
Prerequisite: Music 353.
Continuation of Music 353.

355R. Recording Workshop. (1:1:5 ea.) F, W
Prerequisite: Music 251 or 354.

Studio projects in multitrack recording for
records, broadcast, film, and television.

360R. Performance Study. (1–2:1:1 ea.) F, W,
Sp Prerequisite: music major status; jury
approval.
Private instruction and studio class. One to
three hours of daily practice. Fee.

361. Music Dance Theatre: Vocal Styles.
(2:2:2) F Prerequisite: Music 161, 228, 261, or
instructor's consent.

Study of repertory and performance
problems.

363. Vocal Pedagogy. (2:2:1) W Prerequisite:
voice performance and pedagogy major
status or instructor's consent.

364. Keyboard Pedagogy. (2:2:1) F
Prerequisite: keyboard performance and
pedagogy major status or instructor's
consent.

Basic pedagogical principles as applied to
keyboard instruments.

365. Piano Pedagogy. (2:2:1) W Prerequisite:
Music 364.

Preparation for supervised private or
group teaching.

366. Organ Pedagogy. (2:2:1) W even yr.
Prerequisite: Music 364.

Preparation for supervised private or
group teaching.

367. Woodwind Pedagogy. (2:2:1) F odd yr.
Prerequisite: instrumental performance and
pedagogy major status or instructor's
consent.

368. Brass Pedagogy. (2:2:1) F even yr.
Prerequisite: instrumental performance and
pedagogy major status or instructor's
consent.

369. String Pedagogy. (2:2:1) F even yr.
Prerequisite: instrumental performance and
pedagogy major status or instructor's
consent.

370. Guitar Pedagogy. (2:2:1) F odd yr.
Prerequisite: instrumental performance and
pedagogy major status or instructor's
consent.

371. K–6 Music Methods 2. (2:3:0) F odd yr.
Prerequisite: Music 271.

Contemporary issues in music education:
special learners, preschool, gifted, etc.

372A. Woodwind Workshop. (1:0:3) F

Prerequisite: Music 192, 194, 196, 198.

Learning to play and to teach woodwind instruments; survey of instructional materials; emphasis on clarinet and saxophone.

372B. Woodwind Workshop. (1:0:3) W

Prerequisite: Music 192, 194, 196, 198.

Continuation of Music 372A. Emphasis on flute, oboe, and bassoon.

373A. Brass Workshop. (1:0:3) F Prerequisite:

Music 192, 194, 196, 198.

Learning to play and to teach brass instruments; survey of instructional materials; emphasis on trumpet and French horn.

373B. Brass Workshop. (1:0:3) W

Prerequisite: Music 192, 194, 196, 198.

Continuation of Music 373A. Emphasis on trombone, baritone, and tuba.

374. Percussion Workshop. (1:0:3) F

Prerequisite: Music 192, 194, 196, 198.

Learning to play and teach percussion instruments; survey of instructional materials.

375A. String Workshop. (1:0:3) F

Prerequisite: Music 192, 194, 196, 198.

Learning to play and teach string instruments; survey of instructional materials, emphasis on violin and viola.

375B. String Workshop. (1:0:3) W

Prerequisite: Music 192, 194, 196, 198.

Continuation of Music 375A. Emphasis on cello and bass.

376A. Choral Practicum. (3:3:0) F

Prerequisite: Music 235, 276, 292, 294, 296, 298.

Applied conducting technique, score analysis and preparation, evaluating solo performance, and application of learning theory.

376B. Choral Practicum. (3:3:0) W

Prerequisite: Music 235, 271, 276, 292, 294, 296, 298.

Curriculum design, score analysis and preparation, choral arranging, rehearsal techniques, survey of literature, and vocal pedagogy including treble voice and changing voice, computers, and computer-assisted instruction.

377A. Instrumental Practicum. (3:3:0) F

Prerequisite: Music 235, 276, 292, 294, 296, 298.

Applied conducting technique, score analysis and preparation, evaluating solo performance, and application of learning theory.

377B. Instrumental Practicum. (3:3:0) W

Prerequisite: Music 235, 271, 276, 292, 296, 298.

Curriculum design, evaluation of ensemble performance, advanced rehearsal techniques, administration of secondary instrumental music programs, computers, and computer-assisted instruction.

378. Music for the Elementary Classroom Teacher. (3:3:0) F, W, Sp, Su Prerequisite: EEd

310R.

Establishing a classroom environment for musical development; emphasis on appropriate songs, activities, resources, and teaching strategies.

384. Jazz Improvisation 2. (2:2:1) W

Prerequisite: Music 284 or consent of director.

Intermediate improvisation: theory and technique.

386R. Songwriting 2. (2:2:0 ea.) W

Prerequisite: Music 186.

Projects applying songwriting skills to media production and publication.

387R. Composition 4. (2:1:2 ea.) F, W

Prerequisite: Music 288, 292, 294, 296, 298, and junior-level screening.

Private composition lessons and weekly seminars in principles of late twentieth-century music.

391. Jazz Keyboard. (2:2:0) Sp Prerequisite:

Music 292, 294, 296, 298, or instructor's consent.

Lead sheets, chord voicings, and other aspects of jazz performance practice.

395. Form and Analysis. (3:3:0) F, W, Sp

Prerequisite: Music 202, 292, 294, 296, 298.

Analytical study of forms from the common-practice period, including baroque contrapuntal structures and instrumental forms, classical sonata cycle, and romantic part forms.

399R. Cooperative Education. (1–6:Arr.:Arr.

ea.) F, W, Sp Su Prerequisite: instructor's consent.

Internship or externship in creative, performing, producing, or teaching applications of major course work.

400R. Topics in Music. (2:2:0 ea.) F, W

Prerequisite: Music 292, 294, 296, 298, or instructor's consent.

Topics vary.

402A. Vocal Literature. (2:2:0) W odd yr.

Prerequisite: acceptance into 360R or 460R, or instructor's consent.

Survey of literature with emphasis on art song. Research in area of concentration.

402B. Vocal Literature. (2:2:0) W even yr.

Prerequisite: acceptance into 360R or 460R, or instructor's consent.

Continuation of Music 402A with emphasis on opera and oratorio.

403A. Piano Literature. (2:2:0) F Prerequisite:

acceptance into 360R or 460R, or instructor's consent.

Survey of literature. Research in area of concentration.

403B. Piano Literature. (2:2:0) W

Prerequisite: acceptance into 360R or 460R, or instructor's consent.

Continuation of Music 403A.

404A. Organ Literature. (2:2:0) F odd yr.

Prerequisite: acceptance into 360R or 460R, or instructor's consent.

Survey of literature. Research in area of concentration.

404B. Organ Literature. (2:2:0) W even yr.

Prerequisite: acceptance into 360R or 460R, or instructor's consent.

Continuation of Music 404A.

405. Chamber Music Literature. (2:2:0) W

odd yr. Prerequisite: acceptance into 360R or 460R, or instructor's consent.

Survey of literature, including research in field of concentration.

406. String Literature. (2:2:0) F odd yr.

Prerequisite: acceptance into 360R or 460R, or instructor's consent.

Survey of literature, including research in field of concentration.

407. Symphonic Literature. (2:2:0) W even yr.

Prerequisite: acceptance into 360R or 460R, or instructor's consent.

Survey of literature, including research in field of concentration.

426R. Music Dance Theatre: Senior

Performance Project. (1:0:3 ea.) W

Prerequisite: ThF 361; consent of MDT advisory committee.

Final senior performance project integrating music, dance, and theatre in a single performance.

441R. New Music Ensemble. (1:0:1 ea.) F, W

Prerequisite: instructor's consent.

449R. Senior Recital. (0:Arr.:Arr. ea.) F, W, Sp

Prerequisite: concurrent registration in Music 360R, 387R, or 460R and instructor's consent.

Prerecital hearing required at least three weeks before juried recitals. Fee.

460R. Performance Study. (1–4:1:1 ea.) F, W,

Sp Prerequisite: major in performance and pedagogy; jury approval.

Advanced private instruction and studio class. Three to five hours of daily practice. Fee.

466R. Organ Practicum. (2:2:1 ea.) W odd yr.,

Sp even yr. Prerequisite: Music 166 or organ performance and pedagogy major.

468. Jazz Pedagogy. (1:2:0)

Organizing and teaching jazz in the secondary school. Designed for the music educator.

470R. Supervised Teaching. (1:0:3 ea.) F, W

Prerequisite: completion of required pedagogy class, recommendation of performance instructor, and submission of preparatory program internship application. Enrollment must include concurrent registration in ScEd 376R (music section) during one of two required semesters.

Applying pedagogical principles to teaching.

471. K-6 Music Practicum. (3:3:0) W even yr.

Topics include children's choir, designing elementary music curriculum, and working with a laboratory children's choir.

481. Orchestration. (3:3:0) F, W Prerequisite: Music 202, 292, 294, 296, 298.

Scoring for standard orchestral instruments.

483. Counterpoint. (3:3:0) F Prerequisite: Music 292, 294, 296, 298.

Eighteenth-century contrapuntal styles and techniques, emphasizing those of J. S. Bach.

494R. Independent Readings. (1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: approval of advising professor.**497R. Projects: Music in Media.** (2:2:0 ea.) F Prerequisite: music major status, Music 186; 287 or 355R.

Projects in composition and arranging for film, broadcast media, sheet music, and records.

498. Senior Thesis. (3:Arr.:Arr.) F, W, Sp, Su Prerequisite: senior status and endorsement by faculty advisor.**499R. Honors Thesis.** (1-6:0:0 ea.) F, W, Sp, Su

Advanced Undergraduate or Graduate Courses

500. Musical Research Techniques. (2:2:0) Prerequisite: graduate status.**501. Music Education Research Techniques.** (2:2:0) Prerequisite: graduate status.**503. Aesthetics.** (3:3:0) W

Fundamental questions of aesthetic theory from classical antiquity to the present, emphasizing musical aesthetics.

505R. Applied Literature. (2:2:1 ea.) On dem. Prerequisite: a minimum of one enrollment in Music 402-407.

Continuation of Music 402-407.

506. Choral Literature 1. (2:2:0) F odd yr. Prerequisite: instructor's consent.

Concentrated analytical study and application of choral literature through Beethoven.

507. Choral Literature 2. (2:2:0) W even yr. Prerequisite: instructor's consent.

Concentrated analytical study and application of choral literature from post-Beethoven to the present.

508. Orchestra Literature 1. (2:2:0) Prerequisite: instructor's consent.

Concentrated analytical study and application of orchestral literature of the baroque and classical eras.

509. Orchestra Literature 2. (2:2:0) Prerequisite: instructor's consent.

Concentrated analytical study and application of orchestral literature of the romantic era and the 20th century.

510. Band Literature. (2:2:0) Prerequisite: instructor's consent.

Concentrated study of band literature through analysis and conducting.

532R. Score Preparation and Conducting: Instrumental. (2:2:0 ea.)**533R. Score Preparation and Conducting: Choral.** (2:2:0 ea.)**534R. Score Preparation and Direction: Jazz.** (2:2:0 ea.)**560R. Performance Instruction: Minor.** (1-2:1:0 ea.) F, W, Sp, Su Prerequisite: graduate music major status; completion of undergraduate performance instruction; secondary instrument.

Graduate performance instruction for those not majoring in performance and pedagogy. Fee.

570. Music for Elementary School Teachers. (2:2:0) On dem. Prerequisite: Music 371, 471, or elementary music teaching experience.

Experiences in teaching various music activities in the elementary school.

571. Elementary Education Music Pedagogy. (2:2:0) On dem. Prerequisite: Music 371 and equivalent of elementary education teaching minor in music.

Orff, Dalcroze, and Kodaly materials and techniques.

575R. Summer Music Workshops and Clinics. (1-2:4:4 ea.) On dem.**576. Fundamentals and Techniques of the Marching Band.** (2:2:2) On dem. Prerequisite: Music 294, 296. For music education majors only.

Planning, charting, and scoring for marching bands.

581. Twentieth-Century Orchestration. (3:3:0) F Prerequisite: Music 481.

New techniques for standard and new instruments; analysis and listening.

583. Sixteenth-Century Counterpoint. (3:3:0) W Prerequisite: Music 483.

Strict modal counterpoint in sixteenth-century style (Palestrina); includes species, text setting, and motet.

591. Advanced Topics in Keyboard Harmony. (2:2:0) F Prerequisite: instructor's consent.

Topics vary.

595. Score Analysis. (2:2:0) F, Su

Analysis of representative choral and instrumental works from the Renaissance through contemporary styles.

596. Schenker Analysis. (3:3:0) W Prerequisite: Music 395 or equivalent.

Schenker's system of tonal analysis.

599R. Cooperative Education. (1-6:Arr.:Arr. ea.) On dem. Prerequisite: instructor's consent.

Internship in creative, performing, producing, or teaching applications of major course work.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

600R. Topics in Music. (1-3:3:0 ea.)**601. Music in the Middle Ages.** (3:3:0)**602. Music in the Renaissance.** (3:3:0)**603. Music in the Baroque Era.** (3:3:0)**604. Music in the Classic Period.** (3:3:0)**605. Music in the Romantic Period.** (3:3:0)**606. Music of the Contemporary Period.** (3:3:0)**607A. Seminar in Musicology.** (2:2:0)**607B. Seminar in Musicology.** (2:2:0)**608A. History of Notation and Paleography 1.** (3:3:0)**608B. History of Notation and Paleography 2.** (3:3:0)**614R. Concert Choir.** (1:0:4 ea.)**615R. University Singers.** (1:0:5 ea.)**619R. Music Theatre Performance.** (1-3:0:0 ea.)**626R. Wind Symphony.** (1:0:4 ea.)**634R. Synthesis.** (1:0:4 ea.)**638R. Philharmonic Orchestra.** (1:0:4 ea.)**639R. Chamber Orchestra.** (1:0:2 ea.)**641R. Brass Chamber Music.** (1:0:0 ea.)**642R. Early Music Ensemble.** (1:0:0 ea.)**643R. Guitar Ensemble.** (1:0:0 ea.)**644R. Keyboard Ensemble.** (1:0:0 ea.)**645R. Percussion Ensemble.** (1:0:0 ea.)**646R. String Chamber Music.** (1:0:0 ea.)**647R. Vocal Chamber Music.** (1:0:0 ea.)**648R. Woodwind Chamber Music.** (1:0:0 ea.)**649R. Solo Recital.** (2:Arr.:0 ea.)**660R. Performance Instruction: Major.** (1-2:1:0 ea.)**664. Choral Development.** (2:2:0)**665R. Pedagogy.** (2:2:1 ea.)**670R. Supervised Teaching.** (2:0:6 ea.)**671. Influence of Music on Behavior.** (2:0:0)**672. Psychology of Music.** (2:0:0)**673. Historical and Social Foundations of Music Education.** (2:2:0)

674. Philosophical and Aesthetic Foundations of Music Education. (2:2:0)

675. Theories of Music Learning and Motivation. (2:2:0)

679R. Special Lectures in Music Education. (1-5:5:0 ea.)

683. Twentieth-Century Counterpoint. (3:3:0)

684. Advanced Fugue. (3:3:0)

687R. Composition. (3:3:0 ea.)

688R. Composition for Master's Degree. (1-6:Arr.:Arr. ea.)

694R. Independent Readings. (1-3:Arr.:Arr. ea.)

697A. Scholarly Paper for Master of Music Degree. (2:Arr.:Arr.)

697B. Recital. (2:Arr.:Arr.)

698A. Master's Project-Professional Improvement Project. (2:Arr.:Arr.)

698B. Master's Project-Professional Improvement Project. (2:Arr.:Arr.)

699R. Master's Thesis. (1-9:Arr.:Arr. ea.)

700R. Seminar in Music. (1-3:Arr.:0 ea.)

799R. Doctoral Dissertation. (1-9:Arr.:Arr. ea.)

Near Eastern Languages

See Asian and Near Eastern Languages.

Near Eastern Studies

See Kennedy Center for International Studies, David M.

North American Indian Languages

See Linguistics.

Norwegian

See Germanic and Slavic Languages.

Nursing

Dean: June Leifson, Professor, Nursing (592 SWKT)

Associate Dean: Sandra Rogers, Assistant Professor, Nursing (594 SWKT)

Associate Dean: Mary Williams, Associate Professor, Nursing (591 SWKT)

Professors

Isaacs, Patricia C. (1977) BS, MS, U. of Utah, 1975, 1977; EdD, Brigham Young U., 1988.

Leifson, June, Dean (1971) BS, Brigham Young U., 1957; MS, Wayne State U., 1964; PhD, Brigham Young U., 1979.

Associate Professors

Fosbinder, Donna (1991) BS, San Diego State U., 1983; MS, U. of San Diego, 1986; PhD, San Diego State U., 1990.

Hammond, Kathleen B. (1964) BS, Brigham Young U., 1960; MS, U. of Utah, 1964.

Jensen, Marian (1970) BS, MS, U. of Utah, 1960, 1968; MS, Brigham Young U., 1979.

Lyons, Marilyn (1966) BS, U. of Utah, 1960; MA, New York U., 1966; DNSc, Rush U., 1983.

Murphy, Millene F. (1985) BS, Brigham Young U., 1963; MS, U. of Utah, 1970; PhD, Brigham Young U., 1982.

Richardson, Norma (1967) BS, U. of Utah, 1956; MA, New York U., 1966.

Sorensen, Elaine S. (1987) BS, MS, PhD, U. of Utah, 1972, 1979, 1988.

Tillery, Chloe Ann (1967) BS, Brigham Young U., 1958; MEd, Columbia U., 1968.

Williams, Mary, Associate Dean (1978) BS, Brigham Young U., 1971; MS, U. of Utah, 1979; PhD, U. of Arizona, 1991.

Associate Clinical Professors

Anderson, Vickie Lane (1980) BS, MS, Brigham Young U., 1975, 1983.

Mangum, Sandra (1983) BS, BA., Brigham Young U., 1958, 1959; MN, U. of Washington, 1962.

Memmott, Rae Jeanne (1992) BS, Brigham Young U., 1965; MS, U. of Colorado, 1967.

Riddle, Lana B. (1971) BS, Brigham Young U., 1969; MS, U. of Utah, 1971; PhD, Texas Woman's U., 1984.

Assistant Professors

Campbell, Lora Jean (1972) BS, Brigham Young U., 1969; MS, U. of Utah, 1972.

Drake, Richard (1970) BS, Idaho State U., 1965; MS, Wayne State U., 1966; EdD, Brigham Young U., 1992.

Forrest, JoAnne P. (1983) BSN, MS, U. of Utah, 1966, 1970.

Mandleco, Barbara L. (1977) BSN, U. of Wisconsin, Madison, 1967; MN, U. of Florida, 1968; PhD, Brigham Young U., 1991.

Rogers, Sandra, Associate Dean (1980) BS, Brigham Young U., 1974; MS, U. of Arizona, 1980; DNSc, U. of California, San Francisco, 1989.

Schwartz, Rosanne (1981) BS, MS, Brigham Young U., 1978, 1981; PhD, U. of Florida, 1991.

Wiker, Kathleen M. (1972) BS, MS, U. of Utah, 1965, 1969.

Wilson, Mary Louise (1979) BS, U. of Utah, 1953; MPH, U. of California, Berkeley, 1966; MS, U. of California, San Francisco, 1978.

Assistant Clinical Professor

Hunter, Tana (1991) BS, Brigham Young U., 1974; MS, U. of Utah, 1982.

Westien, Mary Jo (1988) BS, U. of North Dakota, 1960; MS, U. of Utah, 1964.

Instructors

Abegglen, JoAnn (1985) BS, Brigham Young U., 1967; MS, U. of Utah, 1973; MS, Brigham Young U., 1988.

Baum, Lynda C. (1990) BS, Brigham Young U., 1967; MS, U. of Utah, 1985.

Beckstrand, Renea L. (1987) AS, Ricks Coll., 1979; AS, BS, MS, Brigham Young U., 1981, 1983, 1987.

Bond, Elaine (1991) BS, MS, U. of Utah, 1989, 1990.

Brandriet, Lois M. (1989) AD, Coll. of St. Mary, Omaha, 1977; BS, Westminster Coll., 1985; MS, Brigham Young U., 1988.

Buerger, Wilma S. (1991) BS, U. of Utah, 1977; MS, Brigham Young U., 1984.

Callister, Lynn Clark (1988) BS, Brigham Young U., 1964; MN, Wichita State U., 1988.

Coverston, Catherine R. (1989) AS, Brigham Young U., 1969; BSN, U. of the State of New York, Albany, 1987; MSN, Medical Coll. of Georgia, 1989.

Johnsen, Vickie (1989) AS, Weber State Coll., 1968; BS, MS, Brigham Young U., 1985, 1987.

Linebarger, Sandra L. (1989) BSN, MEd, U. of Florida, 1963, 1964; MS, U. of Utah, 1986.

Measom, Gary (1991) BS, MS, Brigham Young U., 1978, 1980; PhD, U. of New Mexico, 1992.

O'Neill, Cynthia (1986) BS, San Jose State U., 1970; MS, U. of Utah, 1987.

Emeriti

Alley, Laura Ellen (1972) BS, MS, U. of Utah, 1966, 1968.

Andersen, Rayola H. (1971) AD, BS, MS, U. of Utah, 1948, 1949, 1969; MN, Brigham Young U., 1979.

Bartholomew, Jewel A. (1970) BS, Brigham Young U., 1969, MS, U. of Utah, 1976.

Chaffin, Beverly H. (1976) BS, MS, U. of Utah, 1965, 1969.

Cope, Maxine J. (1970) BS, MS, EdD, U. of Utah, 1948, 1957, 1967.

Dyer, Elaine D. (1975) BS, St. Mary Coll., 1946; MS, PhD, U. of Utah, 1955, 1967.

Hammond, Marilyn (1985) BS, MS, U. of Utah, 1953, 1969.

Jorgensen, Evelyn P. (1977) BS, MS, U. of Utah, 1947, 1975.

Merrill, Ella E. (1965) BS, U. of Utah, 1956; MPH, U. of California, Berkeley, 1964.

Murphy, Elaine (1967) BS, MS, U. of Utah, 1959, 1963.

Potter, Norma (1953) BS, U. of Utah, 1950; MN, U. of Washington, 1961.
 Schmidt, Alice M. (1965) BS, U. of Iowa, 1947; MS, EdD, Brigham Young U., 1964, 1977.
 Talmage, Carol (1985) BS, MS, Brigham Young U., 1950, 1984.
 Van Drimmelen, Jennie B. (1971) RN, 1941; BS, BS, MS, PhD, U. of Utah, 1961, 1961, 1963, 1971.
 Wood, Camilla S. (1973) BS, MS, PhD, U. of Utah, 1947, 1960, 1972.

Programs and Degrees

BS Nursing
 MS Nursing
 Emphases:

Family Nurse Practitioner
 Nursing Administration
 Pediatric Nurse Practitioner

Brigham Young University's baccalaureate nursing program prepares general practitioners with the knowledge, skills, leadership abilities, and values commensurate with professional nursing practice. Nursing education builds on the sciences, humanities, and religious studies to develop the strong theoretical and practical base necessary to understand and meet the needs of people in various health care settings.

Learning comes alive as students move from the classroom through the clinical simulation laboratory to actual patient care. Students assess, diagnose, and treat actual and potential problems in an effort to promote, restore, or maintain health. Baccalaureate graduates develop their ability to be sensitive to the welfare of others, communicate effectively, evaluate research findings, think critically, solve problems, and utilize appropriate technology as they provide quality nursing care to people of all ages.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

The following criteria have been established for acceptance and progression in the baccalaureate program.

1. Be fully matriculated at BYU.
2. Have completed the required prerequisite courses with a C grade or higher and an overall grade point average of not less than 2.5 in prerequisite courses. Acceptance into the nursing major is competitive and restricted to a limited number of openings each year. Not all students who meet the minimum GPA and course completion requirements are guaranteed acceptance into the program.
3. Complete the following before beginning nursing courses: Engl 115, Chem 152, 181,

Zool 260, 261, 361, Mcbio 221, 222, Psych 111, FSN 100. Students may apply to program during semester they are completing prerequisite courses.

4. Students with English as a second language: Take the English Proficiency Examination offered by the Linguistics Department plus all ESL service courses as recommended by the examination outcome. Successfully complete Nurs 102. The college recommends a TOEFL score of at least 500.
5. Maintain a C grade or above in all nursing courses, including prerequisite and supporting courses.

Note 1: Notify advisement center before dropping or interrupting course work.

Note 2: Transfer credit older than seven years will not apply to major without prior approval of the associate dean of Research, Development, and Student Affairs.

Note 3: Students may repeat (1) a prerequisite course once and (2) only two of the prerequisite courses listed in program requirement 4.

Applicants who meet the above criteria are eligible for consideration for acceptance. Students who have been admitted to BYU must apply for the nursing program through the college advisement center (551 SWKT). Students are accepted fall, winter, and spring. Application deadlines and requirements are available from the advisement center.

Computers are used in all health care facilities; therefore students are expected to be computer literate when accepted into the College of Nursing.

BS Nursing

I. Major courses: Nurs 220A,B, 230A*,B*, 240A*,B*, 250A*,B*, 320, 330A*,B*, 342A,B, 436*, 438A*,B*, 442, 444A,B.

II. Prerequisite: Chem 152**, 181, Zool 260, 261, 361, FSN 100, Mcbio 221, 222, Psych 111, Engl 115.

III. Supporting courses: FamSc 210, Psych 342, Math 110***, Stat 221, Engl 316, and one of OrgB 320, Psych 330, or Anthr 101.

A C grade or above must be maintained in all major courses, prerequisite courses, and supporting courses.

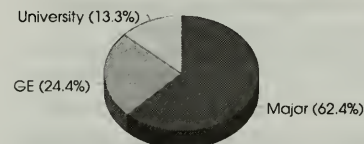
*Registered nurses who wish to enroll for the baccalaureate degree will be permitted to waive Nurs 230A,B, 240A,B, 250A,B, 330A,B, 436, depending on work experience. RNs interested in a baccalaureate degree should contact the advisement center for specific information.

**Students without high school chemistry need to take Chem 101 before 152.

***Students who have not had two years of high school algebra may need Math 99 and 100 before taking 110.

Note: Licensed practical nurses who wish to enter the baccalaureate program should contact the College of Nursing Advisement Center for specific acceptance information.

Summary of Degree Requirements for BS Nursing



1. Total hours	135.5
2. Major hours*	84.5
3. General Education requirements	33.0
Core	9.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	18.0
Religion	14.0
PE/Health	4.0
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.5
16 hours per semester	8.5
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Clinical Assignments and Transportation

Educational experiences are located in Utah, Salt Lake, and Davis counties. Theory courses are taught in Provo. Clinical experiences are in agencies throughout the Wasatch Front. Visits to agencies and client homes are also required. To achieve the best possible clinical education, students will need to travel at different times during their course work. Access to a car is highly recommended. Students are responsible for their own transportation.

Student Malpractice Insurance

All nursing students are required to carry student liability insurance against a malpractice suit. The insurance fee is \$12 per academic year.

College Advisement Center

Linda Stevens, Supervisor (551 SWKT)

The college advisement center (CAC) is designed to help students with academic counseling from the day of orientation through graduation. Students are

encouraged to freely use academic services of the center.

Nursing (Nurs)

Undergraduate Courses

102. Nursing and Medical Terminology. (2:2:0) Independent Study also.

Nursing and medical terminology for prenursing and beginning nursing students or those interested in health occupations.

220A,B. The Professional Nurse in Health Care Delivery. (1.5:1.5:1 ea.) Prerequisite: concurrent registration in Nurs 230.

Ethical, theoretical, philosophical, and legal issues affecting the professional nurse in the health care delivery system.

230A,B. Introduction to the Nursing Process. (4:1.5:7.5 ea.) Prerequisite: Engl 115, Chem 152, 181, Zool 260, 261, Mcbio 221, 222, Psych 111, FSN 100, Zool 361, and concurrent registration in Nurs 220.

Developing cognitive, psychomotor, and affective competencies in working with adult clients in the hospital and community. Fee.

240A,B. Implementing the Nursing Process. (4:1.5:7.5 ea.)

Assessing and diagnosing client needs and problems. Planning, implementing, and evaluating nursing intervention in the hospital and community. Fee.

250A,B. Clinical Pharmacology in Nursing. (1:1:0 ea.) Prerequisite: concurrent registration in Nurs 240.

Pharmacology as it relates to pathophysiology, with implications for nursing.

288. Family Health Management. (2:2:0)

Promotion and maintenance of health over the life span, emphasizing current issues affecting family health.

320. Nursing Research. (2:2:0) Prerequisite: Engl 316, Nurs 230, 240, 330; Stat 221 or comparable statistics course.

Analysis and critique of research in nursing practice.

330A,B. Maternal-Child Nursing. (4.5:2:7.5 ea.) Prerequisite: FamSc 210, Nurs 240.

Nursing care of child-bearing and child-rearing families in a variety of health care settings. Fee.

342A,B. Comprehensive Nursing Care of the Adult Client. (4.5:1.5:9 ea.) Prerequisite: Nurs 330.

Nursing adult clients with complex medical-surgical problems. Fee.

370. Professional Nursing and Health Policy. (3:2:3) Prerequisite: admission to nursing program.

Roles of professional nurses in organizations, politics, and shaping health policy. Open to RNs only.

390R. Independent Study in the Practice of Nursing. (1-9:Arr.:Arr. ea.) Prerequisite: instructor's consent.

Additional titles include: Independent Study in the Political Process and Independent Study in Cross-cultural Nursing.

436. Psychiatric Nursing. (5:2:3) Prerequisite: Psych 342.

Nursing care to clients with complex psychiatric disorders.

438A,B. Community Health Nursing. (2.5:1:4.5 ea.)

Community and family nursing practice in promoting and maintaining health and preventing disease. Fee.

442. Patient Care Management. (5:2:3) Prerequisite: Nurs 342.

Developing professional nursing roles during a clinical preceptorship in directing care for multiple patients. Fee.

444A,B. Nursing Management and Leadership. (2:1:3 ea.) Prerequisite: Nurs 442.

Applying leadership theories and nursing management concepts during a clinical preceptorship.

Advanced Undergraduate or Graduate Courses

510R. Special Programs and Projects. (1-4:Arr.:Arr. ea.) Prerequisite: instructor's consent.

551. Health Assessment. (3:3:0)

Development of physical assessment techniques.

553. Family and Community Dynamics. (2:2:0)

Examination of concepts, theories, and issues central to families and community health.

554. Health Promotion Across the Life Span (3:3:0)

Application of biophysical, cognitive, and psychosocial development concepts in promoting health in various age groups.

555. Pharmacology in Advanced Practice. (3:3:0)

Principles of pharmacology and drug therapy for nurse practitioners.

590R. Independent Study. (1-4:Arr.:Arr. ea.) Prerequisite: instructor's consent.
Individualized study.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

600. Nursing Science 1. (2:2:0)

601. Nursing Science 2. (2:2:0)

602. Nursing Science 3. (1:1:0)

603. Nursing Issues and Health Policy. (2:2:0)

611. Strategic Planning, Marketing, and Evaluation in Health Care Systems. (3:3:0)

612. Administrative-Management Theories. (3:3:0)

613. Financial Management in Nursing. (3:3:0)

614. Administrative Residency. (3:0:3)

620. Pathophysiology and Diagnostic Testing. (3:2:1)

622. Diagnosis and Management of Common Disorders. (6:3:3)

625. Advanced Practice Seminar. (1:1:0)

630. Diagnosis and Management of Chronic Family Health Problems. (5:3:2)

632. Diagnosis and Management of Acute Family Health Problems. (4:2:2)

635. Advanced Practice as a Family Nurse Practitioner. (6-8:0:6-8)

640. Diagnosis and Management of Chronic Pediatric Health Problems. (4:2:2)

642. Diagnosis and Management of Acute Pediatric Health Problems. (6:3:3)

645. Advanced Practice as a Pediatric Nurse Practitioner. (4-5:0:4-5)

698R. Project. (1-6:Arr.:Arr. ea.)

699R. Master's Thesis. (1-6:Arr.:Arr. ea.)

Nutrition

See Food Science and Nutrition.

Organizational Behavior

See Management, J. Willard and Alice S. Marriott School of.

Philosophy

James E. Faulconer, Chair (3196 JKHB)

Professors

Carter, K. Codell (1973) BS, MA, U. of Utah, 1963, 1964; PhD, Cornell U., 1968.

Graham, Daniel W. (1986) AB, Davidson Coll., 1970; MA, Brigham Young U., 1975; PhD, U. of Texas, Austin, 1980.

Madsen, Truman G. (1957) BS, MS, U. of Utah, 1951, 1952; MA, PhD, Harvard U., 1957, 1960.

Packard, Dennis Jay (1974) AA, Miracosta Coll., 1966; BA, PhD, Stanford U., 1968, 1974.

- Paulsen, David L. (1973) BS, Brigham Young U., 1961; JD, U. of Chicago, 1964; PhD, U. of Michigan, 1975.
- Rasmussen, Dennis F. (1970) BS, U. of Utah, 1966; MPhil, PhD, Yale U., 1968, 1970.
- Warner, C. Terry (1967) BA, Brigham Young U., 1963; MA, PhD, Yale U., 1965, 1967.

Associate Professor

- Faulconer, James E. (1981) BA, Brigham Young U., 1972; MA, PhD, Pennsylvania State U., 1975, 1977.

Assistant Professors

- Anderson, Travis T. (1991) BFA, BA, Brigham Young U., 1985; MA, PhD, U. of Loyola, Chicago, 1989; 1991.
- Hedengren, Paul C. (1981) BA, MA, Brown U., 1971, 1973; PhD, U. of Toronto, 1983.
- Nielsen, Fred Kent (1956) BA, MA, Harvard U., 1954, 1955.

Emeritus

- Riddle, Chauncey C. (1952) BS, Brigham Young U., 1947; MA, PhD, Columbia U., 1951, 1958.
- Yarn, David H. (1950) BA, Brigham Young U., 1946; MA, EdD, Columbia U., 1949, 1958.

Programs and Degrees

- BA Philosophy
- BA Honors in Philosophy and University Honors

Philosophy at BYU

From its first appearance in ancient Greece down to the present, philosophy has sought to understand the world and the place of human beings within it. As it frames ideas by means of which to clarify and explain experience, philosophy discloses its faith in the ultimate lucidity of things. Philosophy's respect for the authority of intelligence fosters a preference for persuasion that is fundamental to personal growth and democratic society.

Students who study philosophy will find that it not only provides insight into life's fundamental concerns, it also helps them develop their capacity for clear thinking and perceptive judgment. Such competence will serve them well as they pursue further education or begin their careers.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

No D credit in major or minor courses is accepted.

BA Philosophy

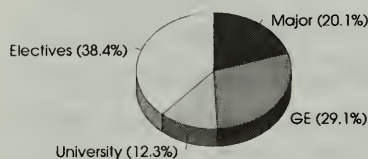
- I. Analytic Thinking (9 hours): Phil 205, 305, 311.

- II. Figures (18 hours): Phil 201, 202, 321 or 322; 330, 331, or 332; two of 340, 341, 342, 343.

- III. Topics (12 hours): Phil 413, 414, or 415; 420, 421, 422, or 423; two other 400-level courses.

- IV. Religion (2 hours): RelA 315 (preferably from a philosophy professor).

Summary of Degree Requirements for BA Philosophy



- | | |
|--|-------|
| 1. Total hours | 128.0 |
| 2. Major hours ♦ | 27.0 |
| 3. General Education requirements | 39.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 6.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 51.5 |
| 6. 40 hours upper-division | |
| GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

♦ Note: Hours do not include any course that could be used to fill GE or university requirements.

Minors

- I. Philosophy: Phil 201, 202, and three other philosophy courses.
- II. Analytic Thinking: Phil 105, 201 or 202, 205, 311, and one other philosophy course.
- III. Logic: Phil 105, 205, 305, 405.

BA with Honors in Philosophy and University Honors

- I. No D credit in major, minor, or GE courses is accepted.
- II. Honors Program requirements: Honors General Education requirements as listed in the Honors Education section of this catalog, with the following modifications:
- A. Meet Foreign Language proficiency requirement in French, German, Greek, or Latin. If students desiring another language show in writing it is supportive of philosophy major, it

may be substituted with departmental approval.

- B. At least two semesters prior to graduation, submit and justify in writing a coherent sequence of GE and religion courses. Justification must show that proposed courses emphasize philosophical skills of close reading and analysis.
- C. Fill GE requirements with Honors sections where available.

III. Philosophy requirements:

- A. Complete requirements listed under preceding BA Philosophy section.
- B. Phil 105, 210, 211.
- C. Honors thesis: In addition to satisfying all Honors requirements, thesis must be under direction of one of philosophy faculty (or faculty member with departmental approval).

Philosophy (Phil)

Undergraduate Courses

For a listing of philosophy courses fulfilling GE requirements, see the General Education section and the philosophy class listings in the Class Schedule.

105. Reasoning and Writing. (3:3:0) Honors also.

Informal grammar, logic, and rhetoric as tools for reading and writing. Library research. Recommended for philosophy majors and minors. Fulfills GE First-Year Writing requirement. No course challenges accepted.

110. Introduction to Philosophy. (3:3:0) Honors and Independent Study also.

Articulating, assessing, and defending fundamental positions on topics such as reason, knowledge, science, education, ethics, politics, and religion.

201. History of Philosophy 1. (3:3:0) Honors also.

Western civilization from Greek antiquity to Renaissance, primarily from perspective of philosophy; exploring fundamental questions in human experience; examining formative events in history; understanding value of important texts.

202. History of Philosophy 2. (3:3:0) Honors also. Prerequisite: Phil 201.

Western civilization from Renaissance to present, primarily from perspective of philosophy; exploring fundamental questions in human experience; examining formative events in history; understanding value of important texts.

205. Introduction to Logic. (3:3:0) Honors and Independent Study also.

Formal logic, its history, and its use in analyzing and evaluating arguments.

210. Science and Civilization 1. (3:3:0)
Honors also.

Civilization from Greek antiquity to scientific revolution; methods in early science and their philosophical significance; exploring fundamental questions in human experience; examining formative events in history; understanding value of important texts.

211. Science and Civilization 2. (3:3:0)
Honors also. Prerequisite: Phil 210.

Civilization from scientific revolution to present; concepts and methods in modern science and their philosophical significance; exploring fundamental questions in human experience; examining formative events in history; understanding value of important texts.

213. Introduction to Ethics. (3:3:0)

Nature and justification of moral standards, beliefs, and decisions.

214. Introduction to the Philosophy of Art. (3:3:0)

The experience of beauty in nature, in literature, and in the arts.

215. Introduction to the Philosophy of Religion. (3:3:0)

Existence and nature of God, God's foreknowledge and man's free will, faith, immortality, and religious experience and language.

305. Formal Logic. (3:3:0) Prerequisite: Phil 205

Formalizing theories, reducing arithmetic to logic, natural deduction, the paradoxes, Gödel's proofs, and the philosophical issues connected with these formal topics. Fulfills GE Language/Mathematics requirement.

311. Philosophical Writing. (3:3:0) Honors also. Prerequisite: Phil 105 or instructor's consent; Phil 201 or 202.

Writing philosophical papers about philosophical texts or problems. Research methods in philosophy. Library research paper. Fulfills GE Advanced Writing requirement. No course challenges accepted.

320. Ancient Philosophy. (3:3:0) Prerequisite: Phil 201.

Selected figures or problems.

321. Plato. (3:3:0) Prerequisite: Phil 201.

322. Aristotle. (3:3:0) Prerequisite: Phil 201.

330. Medieval Philosophy. (3:3:0)
Prerequisite: Phil 201.

Selected figures or problems.

331. Augustine. (3:3:0) Prerequisite: Phil 201.

332. Aquinas. (3:3:0) Prerequisite: Phil 201.

340. Modern Philosophy. (3:3:0) Prerequisite: Phil 202.

Selected figures or problems.

341. Hume. (3:3:0) Prerequisite: Phil 202.

342. Kant. (3:3:0) Prerequisite: Phil 202.

343. Hegel. (3:3:0) Prerequisite: Phil 202.

405. Advanced Formal Logic. (3:3:0)
Prerequisite: Phil 305.

413. Ethics. (3:3:0) Prerequisite: Phil 213.

414. Philosophy of Art. (3:3:0) Prerequisite: Phil 214.

Selected figures or problems in aesthetics.

415. Philosophy of Religion. (3:3:0)
Prerequisite: Phil 215.

Selected figures or problems.

416. Philosophy of Law. (3:3:0) Prerequisite: one philosophy course.

The relation between natural and enacted law; theories of punishment; utilitarian and nonutilitarian theories of law; liberty.

417. Philosophy of Education. (3:0:Arr.)
Prerequisite: one philosophy course.

Critical examination of educational theories, ancient and modern, and their implications for current practice.

418. Science and Religion. (3:0:Arr.)
Prerequisite: one philosophy course.

Epistemological and metaphysical similarities and differences undergirding historical problems in science and religion. Nature and effects of past reconciliations; possibility and desirability of current reconciliations.

419. Philosophy and Literature. (3:3:0)
Prerequisite: one philosophy course.

Philosophical ideas in literature; philosophical ideas about literature and about the interpretation of literature.

420. Philosophy of Language. (3:3:0)
Prerequisite: one philosophy course.

Meaning and reference, synonymy, metaphor, exemplification, translation; linguistic, artistic, and perceptual symbol systems.

421. Metaphysics. (3:3:0) Prerequisite: one philosophy course.

Basic categories of being: appearance and reality, law, causality, space, time, eternity, deity.

422. Epistemology. (3:3:0) Honors also.
Prerequisite: one philosophy course.

Meaning, limits, and justification of knowledge.

423. (Phil-Phscs 314) Philosophy of Science. (3:3:0) Honors also. Prerequisite: Phys 100 or instructor's consent.

Scientific explanation, concepts, and models. Philosophical assumptions and criteria for theory selection, as exemplified by historical development of basic ideas in science.

424. Philosophy of the Social Sciences. (3:3:0) Prerequisite: one philosophy course.
Consciousness, individuality and community, agency, authenticity, and the sciences of individual and social behavior.

450R. Contemporary Figures and Problems. (3:3:0 ea.) Prerequisite: one philosophy course.

499R. Honors Thesis. (1-6:Arr.:Arr. ea.)
Prerequisite: instructor's consent.
Selected topic or figure in philosophy.

Advanced Undergraduate or Graduate Course

501R. Graduate Seminar. (2-5:5:0 ea.)
Prerequisite: instructor's consent.

Selected topic, figure, or movement in philosophy, as announced in Class Schedule.

Physical Education

Robert K. Conlee, Chair (221 RB)

Professors

Allsen, Philip Edmond (1966) BS, Ricks Coll., 1955; MS, Brigham Young U., 1960; EdD, U. of Utah, 1965.

Conlee, Robert K. (1977) BS, MS, Brigham Young U., 1969, 1970; PhD, U. of Iowa, 1975.

Fisher, A. Garth (1969) BS, Brigham Young U., 1955; MA, Sacramento State Coll., 1966; PhD, U. of New Mexico, 1969.

Harrison, Joyce M. (1969) BA, MA, California State U., Long Beach, 1964, 1966; EdD, Brigham Young U., 1973.

Jarman, Boyd O. (1969) BS, Brigham Young U., 1954; MS, EdD, U. of Oregon, 1959, 1965.

Jensen, Clayne R. (1964) BS, MS, U. of Utah, 1952, 1956; EdD, Indiana U., Bloomington, 1963.

Lockhart, Barbara D. (1991) BS, MA, Michigan State U., 1964, 1967; EdD, Brigham Young U., 1971.

McGown, Carl M. (1972) BS, MS, Brigham Young U., 1963, 1964; PhD, U. of Oregon, 1971.

Roundy, Elmo S. (1963) BS, MEd, Brigham Young U., 1953, 1956; EdD, U. of California, Los Angeles, 1965.

Tucker, Larry (1988) BS, MS, Brigham Young U., 1978, 1979; PhD, Southern Illinois U., 1981.

Athletic Professionals

Edwards, R. LaVell (1962) BS, Utah State U., 1952; MS, U. of Utah, 1960; EdD, Brigham Young U., 1978.

Michaelis, Elaine (1960) BS, MS, Brigham Young U., 1960, 1962.

Poole, R. Craig (1980) BS, MS, Utah State U., 1964, 1967; EdD, U. of Utah, 1970.

- Valentine, Ann (1966) BS, Slippery Rock State Coll., 1955; MS, Pennsylvania State U., 1961.
- Wallace, Lu (1956) BS, Utah State U., 1954; MS, Washington State U., 1960.
- Witbeck, Alan R. (1955) BS, MS, Brigham Young U., 1952, 1954.

Associate Professors

- Barker, Ruel M. (1971) BS, Utah State U., 1961; MS, EdD, Brigham Young U., 1964, 1971.
- Bestor, Rollie R. (1969) BS, MS, U. of Wisconsin, Madison, 1954, 1958; EdD, Brigham Young U., 1969.
- Blakemore, Connie L. (1978) BS, U. of Utah, 1960; MS, Brigham Young U., 1967; EdD, Temple U., 1984.
- Clarke, Mark S. (1982) BS, U. of Arizona, 1963; MS, EdD, Brigham Young U., 1964, 1971.
- Cryer, Walter (1964) BS, MS, U. of Illinois Medical, 1952, 1959; EdD, Brigham Young U., 1975.
- Draper, David (1992) BS, Utah State U., 1982; MA, Brigham Young U., 1984; EdD, Northern Illinois U., 1988.
- Durrant, Earlene (1973) BS, MS, EdD, Brigham Young U., 1962, 1963, 1975.
- Hall, Larry Thomas (1978) BS, MS, Brigham Young U., 1970, 1971; PhD, U. of Utah, 1976.
- Leishman, Courtney M. (1962) BS, Utah State U., 1958; MS, EdD, Brigham Young U., 1962, 1976.
- Lewis, Kathryn (1972) BS, Brigham Young U., 1955; MA, Long Beach State Coll., 1962; EdD, Brigham Young U., 1978.
- Myrer, William (1990) BS, U. of Calgary, Canada, 1974; MA, U. of Windsor, Canada, 1977; PhD, Brigham Young U., 1983.
- Silvester, L. Jay (1969) BS, MS, Utah State U., 1959, 1970; EdD, Brigham Young U., 1976.
- Vickers, Betty J. (1971) BS, Kent State U., 1955; MA, California State U., Los Angeles, 1960; EdD, Brigham Young U., 1976.

Associate Athletic Professionals

- Chow, Norman Y. H. (1976) BS, MS, U. of Utah, 1968, 1970; EdD, Brigham Young U., 1978.
- Felt, Richard G. (1967) BS, MA, Brigham Young U., 1958, 1980.
- Olson, Mel J. (1970) BS, MA, EdD, Brigham Young U., 1970, 1973, 1980.
- Stiggins, Charles (1978) BS, MS, Brigham Young U., 1977, 1978.

Assistant Professors

- Chamberlain, Diane (1969) BA, California State U., Los Angeles, 1966; MS, Brigham Young U., 1969; EdD, U. of Utah, 1984.
- Hawkes, Nena Rey (1960) BS, Utah State U., 1954; MS, Brigham Young U., 1965.
- Schulthies, Shane S. (1991) BS, Brigham Young U., 1987; MS, Texas Woman's U., 1989; PhD, Brigham Young U., 1991.

Assistant Athletic Professionals

- Brockbank, Bruce (1992) BS, MS, Brigham Young U., 1990, 1992.
- Byrne, T. J. (1989) BS, Boise State U., 1981; MA, Brigham Young U. 1983.

- French, Roger W. (1980) BS, U. of Minnesota, Minneapolis, 1956; MA, Memphis State U., 1958.

- Howard, Gary Ray (1975) BS, MRE, Brigham Young U., 1967, 1970.
- Julkunen, A. Olavi (1975) BS, Brigham Young U., 1971.
- Merrill, R. Gaye (1981) BS, Brigham Young U., 1978; MS, Indiana U., Bloomington, 1979.
- Noel, Robert Edward (1979) BS, Brigham Young U., 1964.
- Powers, Timothy J. (1975) BS, U. of Montana, 1968; MA, San Jose State U., 1973.
- Pullins, Gary D. (1976) BA, MA, Brigham Young U., 1969, 1975.
- Ramage, Thomas J. (1973) BS, MS, Utah State U., 1957, 1962.
- Reid, Roger L. (1978) BS, Weber State Coll., 1968.
- Russell, Keith (1992) BS, Brigham Young U., 1973.
- Sakamoto, Makato (1988) BS, U. of Southern California, 1970; MA, U. of California, Los Angeles, 1980.
- Schmidt, Kenneth (1983) BS, MS, U. of Utah, 1964, 1969.
- Shane, Patrick (1985) MS, Brigham Young U., 1970.

Athletic Coaches

- Albright, Alan (1984) BS, Brigham Young U., 1976.
- Bassett, Claude (1985) BA, MA, Brigham Young U., 1980, 1984.
- Bradley, Charles (1989) BA, U. of Wyoming, 1981.
- Curtis, George (1985) BS, Southern Utah State Coll., 1971.
- Ingle, Tony (1989) BA, Huntingdon Coll., 1976; MS, North Georgia Coll., 1980.
- Pella, Chris (1986) BS, Utah State U., 1966.
- Reynolds, Lance (1983) BS, Brigham Young U., 1980.
- Wilson, Jeanie (1989) BS, Brigham Young U., 1974.

Emeriti

- Bangerter, Blauer L. (1953) BA, Brigham Young U., 1951; MS, PhD, U. of Utah, 1955, 1964.
- Bunker, Robert E. (1949) BS, Utah State U., 1937.
- Call, C. Boyd (1960) BS, U. of Utah, 1950; MS, Brigham Young U., 1963; PhD, U. of Oregon, 1967.
- Francis, Rulon S. (1963) BS, MS, Brigham Young U., 1952, 1967; PhD, U. of Utah, 1971.
- Hirst, Cynthia C. (1948) BA, U. of Utah, 1947; MS, U. of Washington, 1952; PhD, U. of Utah, 1974.
- Jones, J. Richard (1961) BS, MS, Brigham Young U., 1951, 1955; EdD, U. of Northern Colorado, 1967.
- Kimball, C. Rodney (1947) BS, MS, Brigham Young U., 1955, 1963.
- Millet, W. Floyd (1963) BA, Brigham Young U., 1934; MS, U. of Southern California, 1939.
- Tucker, Karl L. (1961) BS, MS, Brigham Young U., 1952, 1964.

- Watts, Stanley H. (1947) BS, Brigham Young U., 1938.

Programs and Degrees

BS Physical Education

Emphases:

Athletic Training
Public School Teaching (K-12)
Commercial Physical Education
Medicine
Physical Therapy
Exercise Physiology

MEd Physical Education

MS Exercise Science and Athletic Training

EdD Physical Education Administration, Curriculum, and Instruction

PhD Corrective Physical Education and Rehabilitation

PhD Exercise Physiology

The Physical Education Department provides (1) activity courses for the total student body and (2) professional education for prospective physical educators in a variety of occupations at both the undergraduate and graduate levels. The mission of the Department of Physical Education encompasses the larger university mission in that we also wish to assist individuals in their quest for perfection and eternal life. In addition, our supporting mission is (1) to promote the truth that "the human body is sacred, the veritable tabernacle of the divine spirit," (2) to understand and advance the body of knowledge unique to physical education, (3) to prepare physical educators to go forth in society to serve in the broad fields of the discipline in ways that foster dignity and respect for the human body, and (4) to provide experiences that will stimulate the acquisition and enjoyment of sport and fitness skills that can be used throughout life to foster health and happiness.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Physical Education

1. PE 350, 361, 362, 363, 367.
2. 1.5-mile run: All majors are required to qualify in the "good" or above category of the 1.5-mile run. This test must be passed during the last semester.
3. Body composition: All majors are required to maintain the following body composition as measured by the skin-fold caliper or hydrostatic assessment:
Women: 22 percent body fat or less
Men: 15 percent body fat or less
4. No D credit will be accepted in major courses.

Physical Education

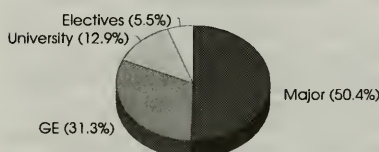
- A minimum of 15 hours in the major must be completed at BYU.

Athletic Training Emphasis

In addition to above core requirements:

- Apply for acceptance into the athletic training program. See program director during semester of enrollment in PE 320. To certify as an athletic trainer, students must join NATA and pass its examination one year later.
- PE 320, 321, 351, 360, 420, 421, 422, 460, 497R, 499R, 561, 568, FSN 100, 410, 459, Psych 381, Zool 380 or Mcbio 391, Hlth 320.
- CPR certification each year.

Summary of Degree Requirements for Athletic Training Emphasis



1. Total hours	128.0
2. Major hours*	64.5
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	7.0
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Public School Teaching (K-12) Emphasis

Students must apply to the Physical Education Department, 221 RB, for admission to this emphasis.

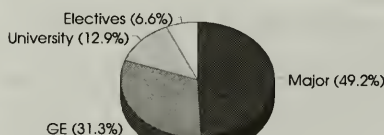
See Physical Education in the Secondary Education section of this catalog for specific course requirements.

Commercial Physical Education Emphasis

This emphasis is designed for the student who wishes to obtain a basic background in physical fitness and sport for employment in a commercial enterprise.

- In addition to above core requirements: PE 120 or 155; 125, 139, 239, 320, 321, 360, 399R, 460; one of 235, 275, 276; one of 103, 116, 131; two of 106, 146, 181; Dance 130.
- Specializations (one of the following):
 - Fitness and Health Promotion*: PE 297, 451, 568; Hlth 320, 365, 460, 563; FSN 100, 410; BusM 256 or 340; BusM 300 or RMYL 586; Acc 200; CS 103.
 - Sports Business Management*: PE 351 or RMYL 481 or 483; PE 297; 350 or 450; 451, 458; OrgB 320; Acc 200; BusM 340 or 256; BusM 300 or RMYL 586; Comms 311 or 230; CS 103; Hlth 320.

Summary of Degree Requirements for Commercial Physical Education Emphasis



1. Total hours	128.0
2. Major hours*	61.5-64.5
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	7.0-10.0
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Medicine, Physical Therapy, and Exercise Physiology Emphases

These emphases are designed for students who wish a strong science background in preparation for advanced study in medicine, physical therapy, or exercise physiology.

Prerequisites (General Education courses): Zool 260, 261; Engl 316; Stat 221; Psych 111; Soc 112.

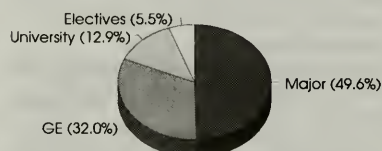
Core Requirements for All Three Emphases

In addition to above core requirements:

- One hour from PE 103, 106, 116, 120, 125, 131, 139, 146, 155, 181, 235, 239, 275, 276, Dance 130.

- PE 460, Math 110, Biol 130, Zool 460, Chem 105, 106, 107, Phscs 105, 106, 107, 108.
- In addition to above core requirements, one of the following three emphases:
 - Medicine Emphasis*: PE 320, 321; 451 or 561; Math 119, Zool 339, 341, Mcbio 221, Chem 351, 352, 353.

Summary of Degree Requirements for Medicine Emphasis

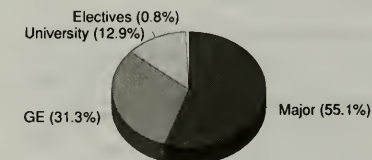


1. Total hours	128.0
2. Major hours*	63.5
3. General Education requirements	41.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	7.0
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

- Physical Therapy Emphasis*: PE 462, 499R, 561, Math 111, Zool 276, Mcbio 221, Hlth 561, Nurs 102, and one of Psych 320, 321, 342, 385 or 585.

Summary of Degree Requirements for Physical Therapy Emphasis



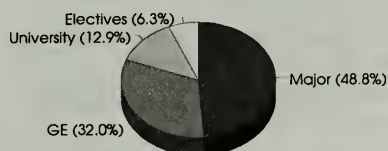
1. Total hours	128.0
2. Major hours*	70.5
3. General Education requirements	40.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0

Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	1.0
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

C. Exercise Physiology Emphasis: PE 320, 321, 399R, 451 or 561, Math 119, Zool 341, Mbio 221 or FSN 100 and 410, Chem 351, 352, 353.

Summary of Degree Requirements for Exercise Physiology Emphasis



1. Total hours	128.0
2. Major hours ♦	62.5
3. General Education requirements	41.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	8.0
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Minors

Minor programs are available in each of the following areas. See Physical Education in the Secondary Education section of this catalog for course listings.

1. Physical Education/Coaching
2. Elementary physical education

Physical Education (PE)

Undergraduate Courses

- 100R. Intercollegiate Athletics (Men).** (0.5:2:10.5 ea.)
- 101R. Activities for Fitness and Weight Control.** (0.5:0:2 ea.)
- 102R. Adaptive Physical Education.** (0.5:0:2 ea.) Prerequisite: medical referral.
- 103. Archery, Beginning.** (0.5:0:2)
- 106. Badminton, Beginning.** (0.5:0:2)
- 107. Badminton, Intermediate.** (0.5:0:2) Prerequisite: PE 106 or equivalent.
- 111. Basketball, Beginning.** (0.5:0:2)
- 112. Basketball, Intermediate.** (0.5:0:2) Prerequisite: PE 111 or equivalent.
- 116. Bowling, Beginning.** (0.5:0:2) Fee.
- 117. Bowling, Intermediate.** (0.5:0:2) Fee.
- 119. Canoeing.** (0.5:0:2) Prerequisite: passing performance on swimming test.
- 120. Cycling.** (0.5:0:2)
Basic knowledge and skills in cycling and bike maintenance.
- 121. Diving, Beginning.** (0.5:0:2)
- 122. Diving, Intermediate.** (0.5:0:2) Prerequisite: PE 121 or equivalent.
- 124. (PE-AnSc) Equitation (Horsemanship).** (0.5:0:2) Prerequisite: rider weight limit of 200 lbs. or instructor's consent.
Handling, grooming, saddling, and supplying horse and rider. Western and English theory used, emphasizing the independent seat and use of aids. Fee.
- 125. Flexibility.** (0.5:0:2)
- 126. Fencing, Beginning.** (0.5:0:2)
- 127. Fencing, Intermediate.** (0.5:0:2) Prerequisite: PE 126 or equivalent.
- *129. Fitness for Living.** (0.5:0:2) Independent Study also. Prerequisite: concurrent registration in Hlth 129 or 130 or demonstrated understanding of basic health principles.
Correct concepts for cardiovascular endurance, strength, flexibility, and weight control.
- *Refer to the Fitness Requirement section of this catalog.**
- 131. Golf, Beginning.** (0.5:0:2)
- 132. Golf, Intermediate.** (0.5:0:2) Prerequisite: PE 131 or equivalent.
- 133. Golf, Advanced.** (0.5:0:2) Prerequisite: PE 132 or equivalent.
- 136. Gymnastics, Beginning.** (0.5:0:2)
- 137. Gymnastics, Intermediate.** (0.5:0:2) Prerequisite: PE 136 or equivalent.

138. Gymnastics, Advanced. (0.5:0:2)

Prerequisite: PE 137 or equivalent.

For advanced gymnasts, men and women; consisting of 30 percent A moves, 40 percent B moves, and 30 percent C moves.

139. Jogging. (0.5:0:2) Independent Study also.

140. Judo, Beginning. (0.5:0:2)

141. Karate, Beginning. (0.5:0:2)

142. Karate, Intermediate. (0.5:0:2)

143R. Physical Training—ROTC. (0.5:0:2 ea.)
For ROTC students only.

146. Racquetball, Beginning. (0.5:0:2)

147. Racquetball, Intermediate. (0.5:0:2)

149R. Recreational Sports for the Physically Impaired. (0.5:0:2 ea.)

151. Rugby, Beginning. (0.5:0:2)

154. Rhythmic Gymnastics. (0.5:0:2)

155. Self-Defense. (0.5:0:2)

Fundamental principles, skills, and techniques.

156. Soccer, Beginning. (0.5:0:2)

157. Soccer, Intermediate. (0.5:0:2) Prerequisite: PE 156 or equivalent.

159. Softball. (0.5:0:2)

161. Skiing, Beginning. (0.5:0:5)

Sections formed on basis of ability, with instruction suited to varying skill levels in skiing fundamentals. Student furnishes own ski equipment and pays ski tow fees. Fee. (Permission to withdraw with refund restricted.)

162. Skiing, Intermediate. (0.5:0:5) Fee.

164. Skiing, Cross-Country. (0.5:0:2) Fee.

169. Skill Analysis and Application. (0.5:0:3)
Instruction and drill in basic skills. Required for elementary education majors.

170. Swimming for Nonswimmers. (0.5:0:2)

171. Swimming, Beginning. (0.5:0:2)

172. Swimming, Intermediate. (0.5:0:2) Independent Study also. Prerequisite: PE 171 or equivalent.

174R. Swimming for the Handicapped. (0.5:0:2 ea.)

176. Rhythmic Swimming. (0.5:0:2)
Swimming to music.

178. Synchronized Swimming, Intermediate. (0.5:0:2) Prerequisite: PE 176 or equivalent.

179. Swim: Fitness Activities. (0.5:0:2)
Exercise workout in water emphasizing flexibility, strength, and endurance. For nonswimmers and swimmers.

181. Tennis, Beginning. (0.5:0:2)

182. Tennis, Intermediate. (0.5:0:2)

Prerequisite: PE 181 or equivalent.

183. Tennis, Advanced. (0.5:0:2) Prerequisite:

PE 182 or equivalent.

185. Track and Field, Beginning. (0.5:0:2)

186. Volleyball, Beginning. (0.5:0:2)

187. Volleyball, Intermediate. (0.5:0:2)

Prerequisite: PE 186 or equivalent.

188. Volleyball, Advanced. (0.5:0:2)

Prerequisite: PE 187 or equivalent.

189. Water Polo. (0.5:0:2)

191. Weight Training, Beginning. (0.5:0:2)

192. Weight Training, Intermediate. (0.5:0:2)

Prerequisite: PE 191 or equivalent.

Theory and technique of maximal strength development, emphasizing "power" and "Olympic" lifts.

196. Wrestling, Beginning. (0.5:0:2)

197. Wrestling, Intermediate. (0.5:0:2)

Prerequisite: PE 196 or equivalent.

200R. Intercollegiate Athletics (Women). (0.5:0:3 ea.)

201R. Extramural Sports. (0.5:0:2 ea.)

203R. Performance Psychology. (1:1:1 ea.)

Relaxation and imagery for athletes and performing artists.

206R. Officiating Team Sports. (1:0.5:1.5 ea.)

Rules, techniques, problems, and procedures in officiating football, basketball, volleyball, soccer, softball, or baseball. Suggested for those who wish to officiate in intramural and church programs. National Federation or OSA examinations given.

207R. Officiating Individual Sports. (1:0.5:1.5 ea.)

Rules, techniques, problems, and procedures in officiating men's and women's gymnastics, swimming and diving, racquet sports, track and field, or wrestling.

229. Basic Sport Pedagogy. (2:2:0)

Sport pedagogy for students *minoring* in physical education/coaching.

230. Team Sports: Skills and Teaching

Techniques. (2:2:6) Prerequisite: instructor's consent. For physical education public school teaching majors only.

Skills and teaching techniques for basketball, volleyball, softball, and soccer.

231. Individual Sports: Skills and Teaching

Techniques. (2:2:6) Prerequisite: instructor's consent. For physical education public school teaching majors only.

Skills and teaching techniques for archery, bowling, badminton, golf, tennis, and racquetball.

232. Ski Instruction Methods. (1:0:4)

Prerequisite: PE 162 or equivalent.

For those who wish to qualify as student instructors in the ski program. Fee.

234. Team Sport Fundamentals. (1:0:4)

Prerequisite: PE 229.

Skill and pedagogy development in soccer and volleyball. For *minors* in physical education/coaching only.

235. Swimming: Skills and Teaching

Techniques. (1:0:3) Prerequisite: PE 171, 172, or equivalent.

237. Individual Sport Fundamentals. (1:0:4)

Prerequisite: PE 229.

Skill and pedagogy development in tennis and weight training. For *minors* in physical education/coaching only.

239. Weight Training: Skills and Teaching

Techniques. (0.5:0:2)

242. Track and Field: Skills and Teaching

Techniques. (1:1:3)

248. Wrestling: Skills and Teaching

Techniques. (0.5:0:2)

274. Adapted Swimming Instruction. (1:0:2)

ARC Instructor training course for teaching handicapped.

275. Basic and Emergency Water Safety. (1:0:3) Prerequisite: ARC Swimmer level.

276. Water Safety Instruction. (1:0:3)

Prerequisite: ARC Swimmer level and completion of lifesaving training.

277. Techniques of Lifeguarding. (1:1:2)

Prerequisite: PE 275, Hlth 121, CPR.

ARC certification course for lifeguards.

297. Introduction to Commercial Physical Education. (2:1:3)

Seminars and field trips.

320. Basic Athletic Training. (3:3:0)

Prerequisite: Zool 260; concurrent registration in PE 321.

Recognition, evaluation, and care of athletic injuries. Techniques in taping, preventing, and rehabilitating injuries.

321. Basic Athletic Training Lab. (1:0:1)

Prerequisite: concurrent registration in PE 320. Fee.

330R. Coaching Selected Sports. (2:1:2 ea.)

Prerequisite: appropriate skills and teaching techniques class or equivalent.

Theory, fundamentals, strategies, and techniques of coaching tennis, golf, badminton, archery, soccer, or field hockey.

335. Coaching Competitive Swimming. (2:1:2) Prerequisite: intermediate swimming

skills.

Analysis of strokes, starts, turns, and legalities of each.

341. Coaching Basketball. (2:2:1)

Prerequisite: PE 230 or equivalent.

342. Coaching Track and Field. (2:1:2)

Prerequisite: PE 242R or equivalent.

343. Coaching Gymnastics. (2:1:2)

Prerequisite: PE 136 or equivalent.

344. Coaching Football. (2:2:1)

345. Coaching Volleyball. (2:2:1)

Prerequisite: PE 230 or equivalent.

346. Coaching Baseball and Softball. (2:2:1)

Prerequisite: PE 230 or equivalent.

348. Coaching Wrestling. (2:1:2) Prerequisite:

PE 196 or equivalent.

Some emphasis on managing meets and tournaments.

350. Historical, Philosophical, and Sociological Foundations of Physical Education. (3:3:0)

351. Administration of Athletic and Intramural Programs. (3:3:0) Independent Study also.

Management styles and techniques for interschool athletic and intramural programs; policies concerning eligibility, contest management, safety, facilities, and legal aspects. For prospective coaches, teachers, athletic directors, and athletic trainers.

360. Measurement and Evaluation in Physical Education. (3:3:0) Prerequisite: Math 99 or equivalent.

Elementary statistical methods and tests as they apply to physical education.

361. Introduction to Motor Learning. (3:2:2)

Prerequisite: PE 360.

362. Kinesiology and Biomechanics of Sport. (4:3:2) Prerequisite: Zool 260, Math 99 or equivalent, Phscs 100 or equivalent.

363. Physiology of Activity. (3:3:0)

Prerequisite: Zool 261; concurrent registration in PE 367.

364. Scientific Bases of Sport 1: Motor Learning. (2:2:0)

Motor learning principles for physical education/coaching minor.

365. Scientific Bases of Sport 2: Kinesiology. (2:2:0)

Kinesiology and biomechanics for physical education/coaching minor.

366. Scientific Bases of Sport 3: Physiology of Activity. (2:2:0)

Physiology of activity for physical education/coaching minor.

367. Physiology of Activity Lab. (0.5:0:0.5)

Prerequisite: Zool 261; concurrent registration in PE 363.

375. Physical Education for Elementary School Teachers. (2:1:3) Prerequisite: PE 169, Dance 275, or equivalent.

376. Practical Experience in Teaching Elementary School Physical Education. (2:0:4) Prerequisite: PE 375.

377. Sport Pedagogy for the Middle School. (1:1:2)

Methods of teaching physical education to middle school students.

378. Sport Pedagogy for the Secondary School. (1:1:2)

Instructional strategies and practical teaching experience for secondary schools.

379. Physical Education for Special Education Teachers. (2:2:2) Prerequisite: PE 169, Dance 275.**399R. Cooperative Education: Internship. (1-9:0:Arr. ea.)** Prerequisite: consent of advisor, PE 297 for commercial physical education majors.

On-the-job experience for physical education majors and coaching and physical education minors.

420. Advanced Athletic Training. (3:2:2) Prerequisite: PE 320, 50 hours in training room.

Advanced theory and practical skills in prevention, immediate care, and treatment of injuries.

421. Physical Exam and Rehabilitation of Athletic Injuries. (3:2:2) Prerequisite: PE 420.

Specific rehabilitation programs for specific injuries: examining the injury.

422. Therapeutic Modalities in Treatment of Athletic Injuries. (3:2:2) Prerequisite: PE 420.

Hydrotherapy, massage, traction, radiant energy, heat, cold, and electrotherapy.

430. Theory of Coaching. (2:2:2)**450. Sociology and Psychology of Sport. (2:2:0)** Independent Study also.**451. Management and Implementation of Adult Fitness Programs. (3:3:0)**

Teaching and communication strategies.

458. Physical Education—Athletics, Sport, and the Law. (2:2:0)

Detailed analysis of legal liabilities and issues relative to supervising physical education, recreation, and athletic programs.

460. Corrective Physical Education. (3:3:0) Prerequisite: PE 362; Zool 260 or equivalent.

Fundamentals of body mechanics and therapeutic exercise, coupled with kinesiological principles for detection and correction of basic neuromusculoskeletal anomalies.

461. Teaching Adapted Physical Education. (2:1:1)

Theory and practice of adapting physical activities for persons with handicapping conditions.

462. Diagnosis and Management of Athletic Injuries. (3:3:1) Prerequisite: Zool 260 or equivalent.

For physical therapists and premedical students for recognition, evaluation, and care of athletic injuries. Techniques in taping, preventing, and rehabilitating injuries.

468. Problems in Conditioning. (2:2:0) Prerequisite: PE 363.

Applying scientific principles to problems in conditioning.

476. Elementary Student Teaching in Physical Education. (4:1:7) Prerequisite: completion of courses in public school teaching major and instructor's consent.**480. Senior Seminar Curriculum and Sport Pedagogy. (2:2:0)**

Curriculum planning and implementation for public schools.

497R. Undergraduate Research and Study. (1-4:0:Arr. ea.) Prerequisite: PE 422 for athletic training majors and/or instructor's consent.

Individual research and study in any area of physical education.

499R. Practicum. (1-8:0:Arr. ea.) Prerequisite: PE 320, 420, and instructor's consent.

Academic and practical application of skills for athletic trainers or physical therapy students.

Advanced Undergraduate or Graduate Courses**550. Motor Development and Growth of Children. (2:2:3)**

Existing body of knowledge regarding motor development of children and significance of physical activity in early childhood.

560. Advanced Corrective Physical Education. (2:2:1) Prerequisite: PE 460.

Techniques of postural evaluation, muscle testing, therapeutic exercises, and relaxation; extent and limitations of physical educator's responsibility for recognizing divergent conditions; referral procedures.

561. Functional Anatomy and Kinesiology. (4:3:2) Prerequisite: PE 362, 363, 460, or equivalent.

Study of human anatomy with adaptation to basic kinesiological principles and procedures.

582. Physical Education for the Mentally Retarded. (2:2:0) Prerequisite: baccalaureate degree in physical education.

Theoretical and practical aspects of teaching mentally retarded child and adult.

586R. Workshop in Fitness and Sport. (1-4:Arr.:Arr. ea.) Prerequisite:

undergraduate major in physical education or equivalent.

599R. Practicum. (1-9:0:Arr. ea.) Prerequisite: PE 468 or concurrent registration for conditioning coaches.

Field experience for physical education students; fifty hours of volunteer service in approved organization required per credit hour.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

620. Advanced Athletic Training. (3:2:2)**621. Physical Examination and Rehabilitation of Athletic Injuries. (2:2:1)****622. Therapeutic Modalities in the Treatment of Athletic Injuries. (2:2:1)****624. Orthopedics in Sports Medicine. (3:2:2)****629R. Athletic Training Practicum. (1-6:0:Arr. ea.)****630. Research Methods in Physical Education. (3:3:0)****631. Research Design in Physical Education. (2:2:1)****649. Curriculum Theory and Design in Physical Education. (3:3:0)****650. Measurement and Evaluation in Physical Education. (2:2:0)****651. Personnel Management and Supervision in Physical Education. (3:3:0)****652. Administration of Physical Education and Athletic Programs. (3:3:0)****654. History of Physical Education. (3:3:0)****655. Philosophy: Ethics and Issues. (2:2:0)****656. Psychological Implications of Sport. (2:2:0)****657. Sport and Society. (2:2:0)****658. Learning Theory, Sport Pedagogy, and Instructional Design in Physical Education. (3:3:0)****659. Theory of Motor Learning. (2:2:0)****661. Fitness and Wellness in the Workplace. (3:3:0)****662. Mechanical Analysis of Activities. (2:2:0)****663. Research Techniques in Biomechanics of Sport. (2:1:2)****666. Exercise Physiology. (3:3:0)****667. Laboratory Methods and Procedures. (2:1:2)****669. Exercise, Testing, and Prescription in Coronary Heart Disease. (2:1:2)****685. Physical Education in the Elementary School. (2:2:0)****691. Seminar. (1:1:0)****693R. Graduate Seminar in Readings. (1:0:2 ea.)****699R. Master's Thesis. (1-9:Arr.:Arr. ea.)****751R. Doctoral Seminar. (2:2:0 ea.)****755. Research on Teaching and Teacher Evaluation in Physical Education. (2:2:0)****766. Advanced Exercise Physiology: Cardiopulmonary. (3:3:0)****769. Advanced Exercise Physiology: Skeletal Muscle. (3:3:0)****797R. Individual Research and Study in Physical Education. (2-9:Arr.:Arr. ea.)****799R. Doctoral Dissertation. (1-18:Arr.:Arr. ea.)**

Physical Science

Physical Science Courses (PhyS)

Administered by the Department of Physics and Astronomy.

100. Physical Science. (3:3:0) F, W, Sp, Su Independent Study also.

Conceptual lectures and demonstrations of most significant and universal laws and models describing physical world by faculty from Physics and Astronomy, Chemistry, and Geology departments. Satisfies GE Physical Science requirement.

110A. Physical Science A. (4:3:2) F, W, Sp For majors in elementary, early childhood, or special education.

Classical and modern physics and chemistry as they relate to current concepts of physical environment. Lab exercises illustrate many topics with concrete examples. With PhyS 110B satisfies GE Physical Science requirement.

110B. Physical Science B. (2:2:1) F, W, Su For majors in elementary, early childhood, or special education.

Concepts and methods used in geology to interpret rock record, protect and make use of earth materials, and better understand natural environment and how to live in it. Lab studies, field trips, home projects. With PhyS 110A satisfies GE Physical Science requirement.

Physics and Astronomy

Daniel L. Decker, Chair (296 ESC)

Professors

Ballif, Jae R. (1962) BS, Brigham Young U., 1953; MA, PhD, U. of California, Los Angeles, 1961, 1962.

Barnett, J. Dean (1958) BA, PhD, U. of Utah, 1954, 1959.

Decker, Daniel L. (1958) BS, MS, Brigham Young U., 1953, 1955; PhD, U. of Illinois, 1958.

Dibble, William E. (1961) BS, PhD, California Inst. of Technology, 1954, 1960.

Dudley, J. Duane (1956) BS, Brigham Young U., 1952; MA, Rice U., 1953; PhD, U. of Utah, 1959.

Evenson, William E., Dean (1970) BS, Brigham Young U., 1965; PhD, Iowa State U. of Science and Technology, 1968.

Hansen, H. Kimball (1963) BS, MS, Brigham Young U., 1957, 1959; PhD, U. of California, Berkeley, 1966.

Harrison, B. Kent (1964) BS, Brigham Young U., 1955; MA, PhD, Princeton U., 1957, 1959.

Hatch, Dorian M. (1968) BS, Utah State U., 1962; MA, PhD, State U. of New York, 1965, 1968.

Jensen, Gary Lee (1966) B.S., Utah State U., 1958; MS, PhD, U. of Michigan, 1960, 1964.

Jones, Douglas E. (1964) BS, MS, PhD, Brigham Young U., 1957, 1959, 1964.

Knight, Larry V. (1973) BS, MS, Brigham Young U., 1958, 1959; PhD, Stanford U., 1965.

Larson, Everett Gerald (1964) BS, MS, PhD, Massachusetts Inst. of Technology, 1957, 1959, 1964.

Mason, Grant W. (1970) BA, Brigham Young U., 1961; PhD, U. of Utah, 1969.

McNamara, D. Harold (1955) BS, PhD, U. of California, Berkeley, 1947, 1950.

Merrill, John J. (1971) BS, MS, PhD, California Inst. of Technology, 1955, 1956, 1960.

Nelson, H. Mark (1959) BS, MS, Brigham Young U., 1953, 1954; PhD, Harvard U., 1960.

Rasband, S. Neil (1972) BA, PhD, U. of Utah, 1964, 1969.

Stokes, Harold T. (1981) BS, Brigham Young U., 1971; PhD, U. of Utah, 1977.

Strong, William J. (1967) BS, MS, Brigham Young U., 1958, 1959; PhD, Massachusetts Inst. of Technology, 1964.

Vanfleet, Howard B. (1960) BS, Brigham Young U., 1955; PhD, U. of Utah, 1961.

Associate Professors

Allred, David D. (1987) BS, Brigham Young U., 1971; MA, PhD, Princeton U., 1973, 1977.

Christensen, Clark G. (1972) BS, Brigham Young U., 1966; PhD, California Inst. of Technology, 1972.

Hart, Grant W. (1985) BS, Brigham Young U., 1977; PhD, U. of Maryland, 1983.

Jones, Steven E. (1985) BS, Brigham Young U., 1973; PhD, Vanderbilt U., 1978.

Rees, Lawrence B. (1986) BS, Brigham Young U., 1976; MS, PhD, U. of Maryland, 1979, 1983.

Spencer, Ross L. (1984) BS, Brigham Young U., 1974; MS, PhD, U. of Wisconsin, 1976, 1979.

Taylor, Benjamin J. (1980) BA, PhD, U. of California, Berkeley, 1964, 1969.

Assistant Professors

Moody, J. Ward (1990) BS, Brigham Young U., 1980; MS, PhD, U. of Michigan, 1984, 1986.

VanHuele, Jean-François S. (1988) BS, Teacher's Proficiency, PhD, Brussels Free U., Belgium, 1979, 1983, 1987.

Research Physicist

Peterson, Bryan G. (1991) BS, PhD, Brigham Young U., 1978, 1983.

Emeriti

Dixon, Dwight R. (1959) BS, Utah State U., 1942; PhD, U. of California, Berkeley, 1955.

Gardner, Andrew L. (1964) BS, Utah State U., 1940; PhD, U. of California, Berkeley, 1955.

Gardner, John H. (1949) BS, Utah State U., 1943; MA, PhD, Harvard U., 1947, 1950.

Hill, Max W. (1958) BA, Brigham Young U., 1954; PhD, U. of California, Berkeley, 1959.

Palmer, E. Paul (1966) BA, PhD, U. of Utah, 1952, 1956.

Programs and Degrees

BS	Physics
BS	Applied Physics
Emphases:	
	Selected Options
	Computer Science
BS	Honors in Physics and University Honors
BA	Physics Teaching
MS	Physics
PhD	Physics
PhD	Physics and Astronomy

Through its undergraduate offerings, the Department of Physics and Astronomy seeks to help students of all disciplines to become more fully aware of our physical environment, to realize that man is capable of comprehending natural laws, and to appreciate the limitations as well as the strengths of science. The curriculum is designed to provide:

1. Perspective on science and an introduction to the role of physics in the human quest for understanding.
2. Training for those who intend to pursue graduate work in physics or astronomy.
3. Preparation for those who intend to enter industrial or governmental service as physicists or astronomers.
4. Undergraduate training for those who will pursue graduate work in business (e.g., MBA) and law.
5. Fundamental background for other physical sciences and engineering.
6. Physics fundamentals required by the biological science, medical, dental, and nursing programs.
7. Training in the subject matter of physics for prospective teachers of the physical sciences.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Required High School Preparation

Note: It is recommended that a student complete the following courses in high school:

- 3 units of English
- 1 unit of physical science, either chemistry or physics.

Because mathematics provides the foundation for all work in the physical and mathematical sciences, particular attention is paid to high school preparation in this subject.

- 4 units of mathematics, consisting of 2.5 units of algebra, 1 unit of geometry, and 0.5 unit of trigonometry. This should qualify students to begin college

mathematics with Math 112, analytic geometry and calculus.

To decide which mathematics course should be taken first, write to the Mathematics Department, 292 TMCB, and request a mathematics placement test.

Program Planning

A suggested sequence of courses that would provide excellent preparation for graduate school follows. Detailed programs for other options are available from the Department of Physics and Astronomy. Courses for students following the physics-astronomy option are noted with an asterisk. Appropriate substitutions may be made for nonrequired courses. Contact the college advisement center regarding General Education and upper-division religion courses.

Core Requirements for All Degree Programs in Physics and Astronomy

I. Major courses: Phscs 121, 122, 221, 222, 340.

II. Supporting courses: Math 112, 113, 343, 344, 434.

Note: Students in physics should take mathematics beginning the first semester of the freshman year. The initial course is determined by the results of the mathematics placement examination. Contact the Department of Mathematics to arrange to take this examination. Physics majors should ordinarily begin with Math 112; if preparation is inadequate, as indicated by the placement exam, students will need to begin with Math 110. In the latter case, students might wish to enter the university during the summer term and bring their mathematics preparation to the point where they can take Math 112 concurrently with Phscs 121 during the fall semester.

III. Language: Students are strongly urged to achieve competence in a foreign language (German, Russian, or French) during their undergraduate career, especially if they intend to go to graduate school.

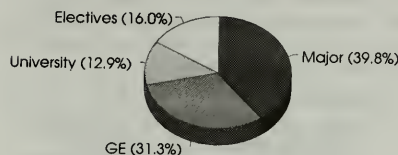
IV. No less than a C- grade will be allowed toward filling the requirements.

BS Physics

I. In addition to above core requirements: Phscs 214, 318, 321, 380, 431, 441, 442, 471, 551, 552.

II. Chem 111 and a computer language course are strongly recommended for all physics majors.

Summary of Degree Requirements for BS Physics



1. Total hours	128.0
2. Major hours*	51.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	20.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
Phscs 121, 122	3	3
Math 112, 113	4	4
Phscs 129*, 130*	2	2
Second Year		
Phscs 221, 222	3	3
Phscs 214	1	
Math 343, 344	3	3
Math 434		3
Third Year		
Phscs 318, 321	3	3
Phscs 340		1
Phscs 441, 442	3	3
Engl 316	3	
Phscs 551		3
Fourth Year		
Phscs 380	3	
Phscs 431, 471	3	3
Phscs 552	3	
Phscs 527*, 528*	3	3

*Additional recommendations for the physics-astronomy option.

Applied Physics

Professional opportunities for physicists often occur in areas of applied physics, relating, for example, to computer science, to energy problems in nuclear, solar, or geothermal power, or to medical, biological,

optical, or acoustical problems. Applied physics options are available in the above areas, and specific programs can also be constructed. Students who are interested in any area of applied physics should plan a detailed program with an advisor in the Department of Physics and Astronomy as early as possible in their university career.

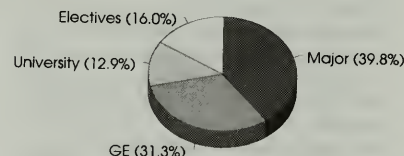
This program is not designed for those students planning to seek a PhD in physics.

BS Applied Physics—Selected Options Emphasis

In addition to above core requirements: Phscs 214, 318, 321, 380*, 441, 442, and 12 hours of approved electives (approval obtained through the department chair).

*Substitutions may be made for this course with the approval of the Physics and Astronomy Department chair.

Summary of Degree Requirements for BS Applied Physics—Selected Options Emphasis



1. Total hours	128.0
2. Major hours*	51.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	20.5
6. 40 hours upper-division	
GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

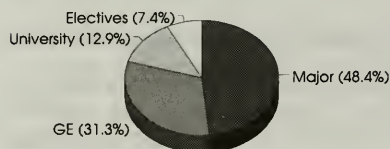
*Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Applied Physics—Computer Science Emphasis

I. In addition to above core requirements: Phscs 318, 381, 431, 441, 581; Math 311; CS 142, 143, 152, 232, 327, 330, 353; Stat 321.

II. Strongly recommended: Phscs 442.

Summary of Degree Requirements for BS Applied Physics—Computer Science Emphasis



1. Total hours	128.0
2. Major hours*	62.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	9.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
Phscs 121, 122	3	3
Math 112, 113	4	4
CS 142, 143	2	2
CS 152		2
Second Year		
Phscs 221, 222	3	3
Phscs 340		1
Math 343, 344	3	3
CS 232, 353	3	3
Third Year		
Phscs 318 or Math 323	3	
Phscs 431, 381	3	3
CS 330		3
Math 434, 311	3	3
Fourth Year		
Phscs 441	3	
Phscs 581		3
CS 327	3	
Stat 321	3	
Engl 316		3

BS with Honors in Physics and University Honors

I. Honors requirements: The Honors General Education graduation requirements as listed in the Honors Education section of this catalog. The foreign language

proficiency requirement should be met in German, Russian, French, Japanese, or an approved substitute. All GE requirements not met through advanced placement (AP) are to be filled by taking Honors sections of GE courses where possible.

II. Physics requirements:

- Register for the sections of RelC 491 and 492 taught in the College of Physical and Mathematical Sciences.
- Complete an Honors thesis in physics. The thesis is to be done under the direction of a faculty member in the Department of Physics and Astronomy and represents a report on original, publishable research. A thesis proposal must be approved by the department chair and the Honors directorate before research is begun. All students intending to graduate with Honors in physics may elect to receive support as research assistants during spring and summer terms between their junior and senior years for the purpose of performing the research necessary for their theses. An oral presentation of the results of the research is to be made as a contributed paper at the spring conference of the College of Physical and Mathematical Sciences or some comparable forum. Departmental approval for the thesis is obtained through the usual Honors Program procedure for approval of Honors theses.

BA Physics Teaching

See Physics in the Secondary Education section of this catalog.

Physics-Astronomy Option

Students whose primary interest is astronomy or astrophysics must take the courses listed under the requirements for a physics major. They may also take Phscs 129 and 130 during the freshman year and could include Phscs 527 and 528 as part of their program in the senior year.

Physics Minor

The standard program for the physics minor comprises all the major courses listed in the core, plus Phscs 214.

Sequence for Science, Professional, and Technical Students

Students who expect to major in physics, other physical sciences, or engineering should begin their study of physics with Phscs 121. Those who expect to study medicine or dentistry or to major in the biological sciences or those who desire an elementary course in applied physics should take Phscs 105, 106, 107, 108.

Courses for Nonscience Students

Nonscience students may profit from Phscs 100 or 314, both of which emphasize the

known fundamental principles of our physical environment and also the role of physics as one of the humanities as well as a science; or Phscs 127, 137, or 167, all of which are directed toward more specialized areas of the physical environment while maintaining contact with the foundations of physics.

Information regarding General Education requirements may be found in the General Education section of this catalog. The basic physical science course, the courses mentioned above, and other physics and astronomy courses will help prepare for particular evaluations in Natural Sciences.

High School Preparation

Students planning to major in physics should take all the high school physics, mathematics, and chemistry courses that are available and should become proficient in English expression, writing, and composition.

Scholarships

A limited number of scholarships, including the John Einar Anderson scholarships, are available to qualified physics majors.

Physics and Astronomy (Phscs)

Undergraduate Courses

100. Fundamentals of Physics. (3:3:0) F

Principles of classical and modern physics as they relate to current concepts of our physical environment.

105. Introductory Applied Physics. (3:3:0) F, W, Sp Prerequisite: high school algebra and trigonometry. Recommended: concurrent registration in Phscs 107.

Applied physics course not requiring calculus. Topics include mechanics, heat, wave motion, sound.

106. Introductory Applied Physics. (3:3:0) F, W, Su Prerequisite: Phscs 105 or equivalent. Recommended: concurrent registration in Phscs 108.

Continuation of Phscs 105. Topics include electricity and magnetism, atomic and nuclear physics, and optics.

107. Introductory Applied Physics Laboratory. (1:0:3) F, W, Sp Prerequisite: Phscs 105 or concurrent registration.

108. Introductory Applied Physics Laboratory. (1:0:3) F, W, Su Prerequisite: Phscs 106 or concurrent registration.

121, 122. Principles of Physics. (3:3:1 ea.) F, W, Sp, Su Honors also for 121. Prerequisite: for 121, concurrent registration in Math 112; for 122, Math 113.

Mechanics; electricity and magnetism. (See Phscs 221 for waves, optics, thermal physics.) For science and engineering students. Walk-in laboratory experience weekly.

127. Descriptive Astronomy. (3:3:0.5) F, W, Sp, Su Honors and Independent Study also.

Nonmathematical presentation of our knowledge of the content and history of the cosmos, frequently using observatory and planetarium. Students taking this course may not receive credit for Phscs 129 or 130.

Note: Phscs 128 is not a laboratory course for Phscs 127.

128. Elementary Astronomy Laboratory. (1:0:2) F Prerequisite: Phscs 127 or 129.

Laboratory course providing firsthand experience in observing and analyzing astronomical phenomena.

129, 130. Introduction to Astronomy. (2:2:0 ea.) 129: F; 130: W Prerequisite: high school algebra and trigonometry.

For students primarily interested in the sciences. Students taking this course may not receive credit for Phscs 127.

137. Introduction to the Atmosphere and Weather. (3:3:0) F, W Prerequisite: PhyS 100 or equivalent.

Nonmathematical introduction to characteristics of the atmosphere, emphasizing structure and dynamic behavior, including the environmental impact of man.

167. Descriptive Acoustics of Music and Speech. (3:3:0) F, W, Sp Prerequisite: PhyS 100 or equivalent.

Introductory acoustics course, emphasizing physical principles underlying production and perception of music and speech.

199R. Cooperative Education. (1–3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of both department chair and cooperative education coordinator.

For students engaged in the Cooperative Education Program.

214. Principles of Physics Laboratory. (1:0:3) F, W, Sp Prerequisite: Phscs 221, concurrent registration, or instructor's consent.

221, 222. Principles of Physics. (3:3:0 ea.) 221: F, W, Sp; 222: F, W, Su Prerequisite: Phscs 122.

Continuation of Phscs 121, 122. Thermal physics, waves, optics; special relativity, quantum physics, atomic, molecular, solid state, and nuclear physics.

281. Principles of Solid State Physics. (3:3:1) F Prerequisite: Phscs 121, 122.

Introduction to physics of solids, including laboratory experience. For students in science, computer science, technology, and engineering.

314. (Phscs-Phil 423) History and Philosophy of Science. (3:3:0) F, Sp Prerequisite: PhyS 100 or instructor's consent.

Scientific explanation, concepts, and models. Philosophical assumptions and criteria for theory selection, as exemplified by historical development of basic ideas in science.

318. Introduction to Classical Field Theory. (3:3:0) F, Su Prerequisite: Math 343, 344, 434.

Classical equations of physical fields; applications of Fourier analysis, Fourier transforms, and orthogonal functions.

321. Mechanics. (3:3:0) W, Su Prerequisite: Phscs 121, Math 344, 434.

Newton's laws applied to particles and systems of particles, including rigid bodies. Conservation principles and Lagrange's and Hamilton's equations.

340. Electronics Lab. (1:1:2) W, Sp Introduction to analog and digital circuits.

380. Experimental Physics. (3:2:4) F, Sp Prerequisite: Phscs 214.

Vacuum techniques, machine shop practice, electronics, and microprocessor instrumentation for measurements in various fields of physics and astronomy.

381. Advanced Experimental Physics. (3:2:4) W Prerequisite: Phscs 340 or instructor's consent.

Applying microcomputers to experimental observation and measurement of physical phenomena.

391R. Seminar in Current Physics. (1:1:0 ea.) F, W on dem.

431. Thermal Physics. (3:3:0) F Prerequisite: Phscs 222, Math 344.

Principles of thermodynamics, with introduction to concepts of kinetic theory and statistical mechanics.

441, 442. Electricity and Magnetism. (3:3:0 ea.) 441: F, Sp; 442: W, Su Prerequisite: Phscs 122 and concurrent registration in 318.

Classical theory of electricity and magnetism developed from its experimental foundations. Electrostatics, magnetostatics, currents and their associated fields, circuit theory, and Maxwell's equations.

471. Optics and Electromagnetic Theory. (3:3:0) W Prerequisite: Phscs 221, 318.

Physical and quantum electromagnetic wave phenomena and modern topics such as coherent interference, holography, lasers, and radiation.

497R. Introduction to Research. (1–3:0:Arr. ea.) F, W, Sp, Su

499R. Honors Thesis. (1–3:0:Arr. ea.) F, W, Sp, Su

Advanced Undergraduate or Graduate Courses

513R. Special Topics in Contemporary Physics. (1–3:3:0 ea.) F, W, Sp, Su on dem. Prerequisite: instructor's consent.

Topics generally related to recent developments in physics.

517, 518. Mathematical Physics. (3:3:0 ea.) 517:F; 518:W Prerequisite: Phscs 318, Math 434.

Topics in modern theoretical physics, including applications of matrix and tensor analysis and linear differential and integral operators.

527, 528. Introduction to Astrophysics. (3:3:0 ea.) 527:F; 528:W Prerequisite: instructor's consent.

Principles and observational techniques of astrophysics.

529. Observational Astrophysics. (3:3:0) On dem. Prerequisite: Phscs 527, 528.

Survey of important areas of current research.

536, 537. Space and Planetary Physics. (3:3:0 ea.) F, W alt. yr. Prerequisite: Phscs 321, 431, 442.

Solar plasmas, planetary atmospheres and interiors, comets, cosmic rays, and space measurement techniques.

545. Introduction to Plasma Physics. (3:3:0) F alt. yr. Prerequisite: Phscs 321, 431, 441.

Introduction to plasma physics, including single-particle motion and both fluid and kinetic models of plasma behavior.

546. Plasma Transport. (3:3:0) W alt. yr. Prerequisite: Phscs 545.

Transport processes in plasmas applied to space physics, fusion, and laser plasmas.

551, 552. Modern Physics. (3:3:0 ea.) F, W Prerequisite: Phscs 222, 318.

Special relativity; analytical foundations of quantum mechanics; applications to atomic, molecular, statistical, solid-state, and nuclear physics; elementary particles.

561. Fundamentals of Acoustics. (3:3:0) W

Generation, transmission, and reception of sound. Vibrating systems, properties of elastic media, mechanical and electrical energy, and radiation.

562. Acoustical Measurements. (1–3:0:6) On dem. Prerequisite: Phscs 561 or concurrent registration.

Selected experiments in acoustics.

565. Acoustics of Music and Speech. (3:3:0) F alt. yr. Prerequisite: Phscs 561 or instructor's consent.

Sound production and perception, techniques for analysis and synthesis, computer modeling, machine recognition, ensemble effects.

566. Architectural Acoustics and Noise. (3:3:0) F alt. yr. Prerequisite: Phscs 561 or instructor's consent.

Computer modeling of enclosures, techniques for measuring noise spectra, room design, noise control.

571. Laser Physics. (3:3:0) F Prerequisite: Phcs 222, Math 344, and basic understanding of atomic physics and optics.

Physics of coherent radiation throughout the electromagnetic spectrum, including amplification and laser cavities. Discussion based on quantum mechanical principles, but mathematical treatment classical.

581. Solid State Physics. (3:3:0) W alt. yr. Prerequisite: Phcs 222.

Introduction for students in physics, chemistry, geology, and engineering. Phenomena occurring in solids, and their related physical concepts.

591R. Colloquium. (0.5:1:0 ea.) F, W

Required of all graduate students every semester in residence.

597. Physical Measurements. (1–3:Arr.:9) On dem.

Individual experiments in a number of physics areas selected from students' major or minor.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

611, 612. Astrophysics. (3:3:0 ea.)

617. Advanced Topics in Theoretical Physics. (3:3:0)

618. Advanced Topics in Theoretical Physics. (3:3:0)

619. Advanced Topics in Theoretical Physics. (3:3:0)

621. Dynamics. (3:3:0)

623. Dynamics of Continuous Media. (3:3:0)

625. Theory of Relativity. (3:3:0)

626. Relativistic Astrophysics. (3:3:0)

627, 628. Advanced Topics in Astrophysics. (3:3:0 ea.)

631, 632. Statistical Mechanics. (3:3:0 ea.)

636. Solar System Magneto-Plasma Interactions. (3:3:0)

641, 642. Mathematical Theory of Electricity and Magnetism. (3:3:0 ea.)

645, 646. Plasma Physics. (3:3:0 ea.)

651, 652. Quantum Mechanics. (3:3:0 ea.)

655, 656. Nuclear Physics. (3:3:0 ea.)

671. X-Ray Physics. (3:3:0)

681, 682. Modern Theory of Solids. (3:3:0 ea.)

697R. Research. (1–6:Arr.:Arr. ea.)

699R. Master's Thesis. (1–9:Arr.:Arr. ea.)

711R. Advanced Topics in Physics. (1–3:3:0 ea.)

751, 752. Advanced Quantum Theory. (3:3:0 ea.)

797R. Research. (1–9:Arr.:Arr. ea.)

799R. Doctoral Dissertation. (1–9:Arr.:Arr. ea.)

Polish

See Germanic and Slavic Languages.

Political Science

David B. Magleby, Chair (745 SWKT)

Professors

Daynes, Byron W. (1990) BS, MS, Brigham Young U., 1963, 1965; PhD, U. of Chicago, 1971.

Farnsworth, Lee W. (1964) BA, MA, U. of California, Berkeley, 1957, 1960; PhD, Claremont Graduate School, 1963.

Fry, Earl Howard (1980) BA, MA, Brigham Young U., 1971, 1972; PhD, U. of California, Los Angeles, 1976.

Hillam, Ray C. (1960) BS, U. of Utah, 1955; MA, George Washington U., 1958; PhD, American U., 1964.

Hollist, W. Ladd (1981) BA, Utah State U., 1971; MA, PhD, U. of Denver, 1973, 1974.

Johnson, G. Wesley (1984) AB, Harvard U., 1957; MA, PhD, Columbia U., 1961, 1967.

Magleby, David Blyth (1981) BA, U. of Utah, 1973; MA, PhD, U. of California, Berkeley, 1974, 1979.

Midgley, Louis C. (1960) BS, MS, U. of Utah, 1954, 1957; PhD, Brown U., 1964.

Reynolds, Noel B. (1970) BA, Brigham Young U., 1967; MA, PhD, Harvard U., 1968, 1971.

Sorensen, Alma Don (1970) BS, Utah State U., 1960; MA, PhD, U. of Illinois 1962, 1965.

Taylor, Stanley A. (1968) BS, Brigham Young U., 1959; MA, MALD, PhD, Fletcher School of Law and Diplomacy, 1961, 1962, 1968.

Thomson, Dennis L., Associate Academic Vice President (1977) BA, U. of Idaho, 1960; MA, Arizona State U., 1961; PhD, U. of California, Santa Barbara, 1969.

Tullis, F. LaMond (1969) BA, MA, Brigham Young U., 1961, 1964; MPA, PhD, Harvard U., 1965, 1969.

Vetterli, R. Richard (1979) BA, Brigham Young U., 1959; MA, U. of California, Los Angeles, 1961; PhD, U. of California, Riverside, 1972.

Associate Professors

Bohn, David Earle (1975) BA, MA, Brigham Young U., 1967, 1969; PhD, Columbia U., 1974.

Bowen, Donna Lee (1978) BA, U. of Utah, 1968; MA, PhD, U. of Chicago, 1972, 1981.

Bryner, Gary (1982) BA, U. of Utah, 1975; MA, PhD, Cornell U., 1980, 1982.

Davis, Richard (1992) BA, MA, Brigham Young U., 1975, 1979; MA, PhD, Syracuse U., 1983, 1986.

Galbraith, David B. (1985) BA, MA, Brigham Young U., 1964, 1965; PhD, Hebrew U. of Jerusalem, 1984.

Hancock, Ralph C. (1987) BA, Brigham Young U., 1977; MA, PhD, Harvard U., 1980, 1983.

Hudson, Valerie M. (1987) BA, Brigham Young U., 1978; MA, PhD, Ohio State U., 1983.

Porter, Bruce (1993) BA, Brigham Young U., 1976; MA, PhD, Harvard U., 1978, 1979.

Snow, R. J. (1990) BA, U. of Utah, 1962; MA, PhD, Northwestern U., 1965, 1966.

Assistant Professors

Hyer, Eric (1988) BA, Brigham Young U., 1979; MA, Columbia U., 1981; East Asian Institute Cert., 1982; M. Phil, Columbia U., 1983; PhD, Columbia U., 1989.

Patterson, Kelly D. (1993) BA, MA, Brigham Young U., 1982, 1984; PhD, Columbia U., 1989.

Williams, Carwin C. (1964) BS, Brigham Young U., 1956; MA, Rutgers U., 1958.

Emeriti

Fletcher, Charles T. (1967) BS, Brigham Young U., 1939.

Mabey, Melvin P. (1955) BS, MA, Brigham Young U., 1947, 1953; DPhil, Oxford U., England, 1955.

Melville, J. Keith (1957) BA, U. of Utah, 1947; MA, U. of California, Berkeley, 1949; PhD, U. of Utah, 1956.

Morrell, Edwin B. (1961) BA, Brigham Young U., 1956; MA, PhD, Harvard U., 1959, 1966.

Paxman, Monroe J. (1973) JD, U. of Utah, 1949.

Reeder, Jesse W. (1952) BS, MS, Utah State U., 1934, 1937; PhD, Cornell U., 1952.

Riggs, Robert E. (1975) BA, MA, U. of Arizona, 1952, 1953; PhD, U. of Illinois, 1955; LLB, U. of Arizona, 1963.

Slover, Robert H. (1964) BA, U. of Oklahoma, 1935; MA, PhD, Harvard U., 1948, 1950.

Programs and Degrees

BA	Political Science
BA	Political Science Teaching
BA-MA	Public Policy

The Political Science Department offers an undergraduate degree in political science for students who are preparing for graduate study in related fields, professional degrees (law or business), or a wide variety of public service occupations, or for liberal arts students who are interested in an undergraduate major that focuses on challenging questions facing modern society.

Students may emphasize the subfields of American government, comparative government, international relations, political philosophy, and public policy. Students wishing to enhance their preparation for public service or business careers may wish to pursue the joint BA-MA public policy degree.

Program Requirements

BA Political Science

The political science major requires 42 hours, at least 27 of which must be taken in residence on the BYU Provo campus. A maximum of 6 hours of cooperative education (internship) credit or PISc 298R (or other simulation courses) may be counted toward the major. No D credit may be accepted. No cooperative education credit from other universities or colleges will be accepted toward the major or minor. All political science majors must take Econ 110 as a required supporting class and all must demonstrate writing competency through a senior paper, the details of which can be obtained from the department.

Students scoring a 5 on the American Government or Comparative Government Advanced Placement exams may receive 3 elective credits toward the major for each exam. However, this credit cannot be substituted for any of the required core courses.

The following courses are required for the major. It is strongly recommended that they be taken in the sequence indicated below. However, adequately prepared nonmajors may take courses out of sequence with the consent of the instructor.

I. Required supporting: Econ 110 (take early).

II. Required: PISc 110, 150, 170 (take before any higher numbered courses, although they may be taken in any order).

III. Required: PISc 200 (*prerequisite to all upper-division courses*).

IV. Required: PISc 201, 202 fulfill the GE History of Civilization sequence for political science majors.

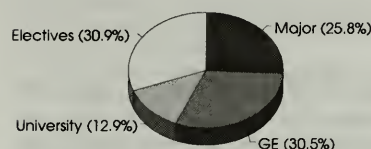
V. Electives: Remaining 21 hours, 15 of which must be upper division, should be drawn from political science courses listed in this catalog. Also, 3 hours each of Europ 336 and NES 336R may be counted as electives.

Students who plan no formal education beyond the BA degree should take a double major or develop adequate skills through other courses that will enhance their employment opportunities. Please consult with the college advisement center for suggested majors or skills.

Students anticipating a professional or graduate program should consult with the college advisement center for recommended courses to strengthen their qualifications for professional or graduate studies.

Students planning to certify in secondary education should consult with advisors in the College of Education for their specific requirements. They should also read the Secondary Education section of this catalog.

Summary of Degree Requirements for BA Political Science



1. Total hours	128.0
2. Major hours*	33.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	39.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA Political Science Teaching

See Political Science in the Secondary Education section of this catalog.

Political Science Minor

I. PISc 110, 150, 170.

II. PISc 201, 202 (also fulfill required History of Civilization sequence).

III. Elective: Two additional upper-division courses (PISc 200 may be prerequisite to some). Consult with the instructor.

Note 1: PISc 101 and 297 are not acceptable electives to majors or minors.

Note 2: No more than a total of 6 credits of simulation courses (PISc 298R) or internship (PISc 399R) may count toward the major.

Note 3: No D credit will be accepted for the major.

Graduate Program

BA-MA Public Policy

The public policy program leads to a joint BA-MA degree; separate BA and MA degrees are not awarded. Students who do not complete the requirements for the joint degree, however, may use their public policy course work to help satisfy

requirements for a BA in political science or some other degree.

I. Requirements for acceptance:

- Satisfactory completion of PISc 110, 200, 201, 202, 330; Math 110; Econ 110.
- Formal application to the Department of Political Science and to the Office of Graduate Studies.

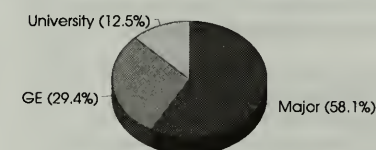
II. Core requirements: PISc 313, 315, 328 (or Soc 300), 331, 334, 530, 532, 533, 599R (internship), and 693R (capstone seminar).

III. Supporting required courses: Econ 280 or 380; Econ 275 or 475 or ManEc 475; Soc 303.

IV. Policy electives (24 hours minimum) from program-specified course alternatives in one area of specialization such as foreign policy and international trade, natural resource policy, or social and family policy, approved by director of public policy program.

V. At least a 3.0 GPA for all required and elective courses.

Summary of Degree Requirements for BA-MA Public Policy



1. Total hours	132.5
2. Major hours*	77.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Internship Programs

J. Scott Dunaway, Managing Director

The Political Science Department provides excellent internship opportunities for students in Washington, D.C., and on the

state and local levels. Internships are offered each semester and term for academic credit and may count up to 6 hours toward a political science major or minor with departmental approval. Additional approved course work completed as a part of the Washington Seminar will be credited toward the departmental major or minor elective requirements. Juniors, seniors, and graduate students of *all academic majors* with a minimum grade point average of 3.0 are invited to apply. For further information, contact Washington Seminar, 745 SWKT, 378-6029.

Political Science (PISc)

Undergraduate Courses

101. Freshman Seminar. (1:1:0)

Academic expectations in the major and in higher education; review of campus resources; meetings with faculty.

110. American Government and Politics. (3:3:0) Honors and Independent Study also.

Origin and development of federal Constitution; national, state, and local governments and politics.

150. Comparative Government and Politics. (3:3:0) Honors also.

Patterns of European, Asian, Latin American, and other political systems.

170. Introduction to International Politics. (3:3:0) Honors also.

Basic forces, practices, institutions, and foreign policies of major powers; problem areas in international politics.

200. Political Inquiry. (3:2:1)

Methodology of political science, including theory and techniques of qualitative and quantitative research design. Prerequisite to all upper-division courses.

201. Western Political Heritage 1. (3:3:0) Honors also.

Western civilization from Greek antiquity to Renaissance, primarily from perspective of political philosophy and scriptures; exploring fundamental questions in human experience; examining formative events in history; understanding value of important texts.

202. Western Political Heritage 2. (3:3:0) Honors also. Prerequisite: PISc 201.

Western civilization from Renaissance to present, primarily from perspective of political philosophy; exploring fundamental questions in human experience; examining formative events in history; understanding value of important texts.

230. Political Participation. (3:3:0)

Influencing public policy; legal mechanisms to promote or halt government action. Where and how to become involved.

260. Law and Society. (3:3:0)

Structure of American legal system and interrelationship of law and society. Selected case studies of law and public policy.

290. Contemporary Political Issues. (3:3:0)

Analysis of political issues in American and international politics. Goals, trends, and attitudes on issues that consume attention of national leaders, public opinion, and world resources.

297. Washington Seminar Preparation. (1:1:0)

Preparatory seminar for students who will be participating in the Washington Seminar.

298R. Political Simulation. (1-2:2:0 ea.)

Utah Intercollegiate Assembly or Model United Nations.

299R. Cooperative Education: Public Service. (1-3:1:3 ea.) Prerequisite: by application.

On-the-job experience for lower-division credit.

301. The Logic of Political Inquiry. (3:3:0)

Comparative analysis of the logic of scientific and normative inquiry.

305. Advanced American Heritage. (3:3:0) Prerequisite: AHtg 100.

Intended especially for prospective American Heritage teaching assistants. Founding and historical development of the American order, including moral, constitutional, and economic aspects.

307. American Political Thought. (3:3:0)

American political and legal ideas from the colonial period to the present.

308. Theories of Human Freedom. (3:3:0)

Scope of human freedom at the metaphysical, individual, social, and political levels.

309R. Topics in Political Philosophy. (3:3:0 ea.)

310. Principles and Issues of the Founding of the American Republic. (3:3:0)

Basic principles and issues underlying the founding of the American republic.

311. State and Local Government and Politics. (3:3:0) Independent Study also. Prerequisite: PISc 110.

Relation of state and national governments, forms of state governments and politics, types of municipal governments and their operation.

312. Urban Government. (3:3:0)

Growth, development, dynamics, and problems.

313. Public Power of Interest Groups. (3:3:0)

Group theory and pluralism; private influence of public decisions, private performance, and enforcement of public functions; pressure group tactics; organization and function of interest groups.

314. The United States Presidency. (3:3:0)

Presidential power in the United States, focusing on major roles of the American presidency.

315. Congress and the Legislative Process. (3:3:0) Prerequisite: PISc 110.

Election process; structure, organization, and procedures of legislative bodies; relations with pressure groups, the president, and executive branch.

316. American Political Parties. (3:3:0)

Electoral and policy-making roles of American political parties today and their future in American politics.

317. Public Opinion and Voting Behavior. (3:3:0)

Relationship between attitudes, opinion, and voting behavior in American politics and institutions.

318. Campaign Management. (1-3:3:0)

Political campaigns from perspective of candidates, media, public, and the political system, as well as from broader perspective of democratic theory.

319R. Topics in American Government and Politics. (1-3:3:0 ea.)

320. American Politics Through Literature. (3:3:0)

American politics through the novel and other literary works. Developing political concepts and themes that come from significant political novels.

321. The Media in American Politics. (3:3:0)

News media's role in processes of American politics, including electoral process, legislative process, and public policy-making.

328. Advanced Methods of Political Analysis. (3:3:0) Prerequisite: PISc 200.

Quantitative techniques in political research.

329R. Topics in Political Behavior. (3:3:0 ea.)

330. Introduction to Public Administration. (3:3:0) Independent Study also.

Organization and operation of government, control over administration, and intragovernmental relationships.

331. Public Policy Process. (3:3:0)

Needs and demands for public action on policy issues; organization of public support; processes and problems of decision making in public policy.

333. Politics of Bureaucracy. (3:3:0)

Theory and nature of bureaucracy; sources of power; political executives; staffs and agency personnel; conflicts with elected officials; public interest and bureaucratic control.

334. Public Ethics. (3:3:0)

Sources of values, areas of conflict with government policy, means of value accommodation.

336. Government and Religion. (3:3:0)

Christian-Hebraic concepts of state. American experience with church-state relations (First Amendment problems). Policy issues of concern to contemporary religions.

339R. Topics in Public Policy. (3:3:0 ea.)**340. Population and Hunger. (3:3:0)**

Population and food production/distribution prospects, problems and policy crises. Policy alternatives as seen from the vantage of developed and developing countries. Ethical features of proposed policies.

342. Politics of Growth and Inequality. (3:3:0)

Interplay of economic growth and political activities; incidence of economic growth with corresponding social inequality and political repression.

348. Korea, Taiwan, and South East Asian Politics. (3:3:0)

Comparative analysis of political developments in key nations of East and Southeast Asia, including regional relationships.

349R. Topics in Politics. (1–3:3:0 ea.)**350. Russian Politics. (3:3:0)**

Politics of the Soviet Union and its successor states; Communist system of government; Gorbachev reforms; disintegration of the USSR and evolution of a new political system.

351. British Government and Politics. (3:3:0)

Examination of the origin and contemporary operation of British political institutions as they relate to British society.

352. African Politics. (3:3:0)

Processes of change and development of nation states; African regionalism and relations with other nations; contemporary political issues.

353. China: Government and Politics. (3:3:0)

Structure and behavior of politics; contemporary problems. Also for Asian Studies majors.

354. Japan: Government and Politics. (3:3:0)

Structure and behavior of politics; contemporary problems. For both political science and Asian Studies majors.

355. Canadian Government and Politics. (3:3:0)

Growth and development of Canada and its government; Canada's role in the contemporary world.

356. French, German, and Italian Government and Politics. (3:3:0)

Structure and dynamics of politics and current political thought.

357. Middle East: Political Systems. (3:3:0)

Social, philosophical, and religious impact on Middle East political institutions in an era of modernization and conflict.

358. Politics and Society in Latin America. (3:3:0)

Conceptual and contemporary issues in Latin America's search for political order and economic development.

359R. Topics in Comparative Politics. (3:3:0 ea.)**360. Constitutional Law—American Federal System. (3:3:0)****361. Constitutional Law—Rights and Immunities. (3:3:0)****363. Administrative Law of the U.S. (3:3:0)**

Legal setting for administrative bodies and judicial control of administrative action. Cases read and discussed.

364. Jurisprudence. (3:3:0)

Problem approach to ancient and modern legal philosophies, emphasizing the nature of justice and the relation of law to morality.

369R. Topics in Law and Justice. (1–3:3:0 ea.)**370. Theory of International Relations. (3:3:0) Prerequisite: PlSc 170, 200.**

Most influential traditions of thought in international relations; includes realism, idealism, Marxism, neorealism, complex interdependence, etc.

371. Foreign Policy Analysis. (3:3:0)

Prerequisite: PlSc 200, 370.

Survey of research regarding multiple levels of foreign policy analysis: individual, group, bureaucratic, societal, economic, systemic.

372. International Political Economy. (3:3:0)

Political implications of international trade, investment, and monetary policies within an increasingly interdependent global context; transnationalism.

373. International Law. (3:3:0) Prerequisite: PlSc 170.

Nature and function of international law; recognition, succession, jurisdiction rights, and immunities of states; nationality and jurisdiction over nations.

374. Ethics and International Affairs. (3:3:0)

Prerequisite: PlSc 200.

Ethical considerations in study and practice of international politics. Realism, idealism, and other theories of state behavior subjected to ethical standards.

375. International Organizations. (3:3:0)

International institutions; transnational relations; rise of newer political organizations: League of Nations, United Nations, European communities, world religions, multinational corporations, terrorist groups, global regimes.

376. U.S. Foreign Policy. (3:3:0)

Formation, implementation, analysis, and criticism of themes in American foreign policy.

377. National Security Affairs. (3:3:0)

Foreign policy, defense strategy, and intelligence security affairs.

379R. Topics in International Relations. (1–3:3:0 ea.)**381. International Relations of the Near East. (3:3:0)**

Interregional relations and conflicts including foreign policy, political economics, Arab nationalism, processes of political change, new alliances, and superpower relations in Near East and North Africa.

382. International Relations of North America. (3:3:0)

Examination and analysis of factors that affect foreign relations of Canada, U.S., and Mexico, emphasizing trade, security, migration, environment.

383. Russian Foreign Policy. (3:3:0)

Patterns, trends, and processes in Soviet foreign policy, 1917 to 1991; emerging foreign policy of post-Soviet Russia and the Commonwealth of Independent States.

384. U.S. Japan Relations. (3:3:0)

Analysis of U.S.-Japan trade and security relationships as applied to careers in government or business. For political science, international relations, Asian Studies, and business majors.

385. International Relations of Asia. (3:3:0)

Foreign policies and international relations of China, Japan, and Northeast and Southeast Asia; historical and contemporary review and analysis.

387. International Political Economy of Illicit Drugs. (3:3:0)

International illegal drug transactions and the national and international policies designed to control them; consequences of those policies.

388. Chinese Foreign Policy. (3:3:0)

Structure and process of foreign policy of the People's Republic of China.

391. Seminar in Washington, D.C. (3:3:0) Prerequisite: acceptance to Washington Seminar.

For students interning in Washington, D.C. Briefings and lectures from government officials and agencies, as well as directed readings on current issues.

392. Seminar in State Government. (3:3:0) Prerequisite: acceptance to Utah state legislature internship.

For students interning with the Utah state legislature. Briefings from state officials and others involved with government.

399R. Cooperative Education Internships. (1–9:0:0 ea.) Prerequisite: acceptance into program.

Work-study on the international, national, state, and local level.

401. Hume's Political Thought. (3:3:0)

Political essays of David Hume.

402. Plato's Political Thought. (3:3:0)

Plato's dialogues that contain political teachings or implications.

405. Federalist Papers. (3:3:0)

The primary defense of the Constitution of the United States, which also constitutes the major commentary on that document.

406. Tocqueville on America. (3:3:0)

Alexis de Tocqueville's *Democracy in America*.

408. Hermeneutics, Deconstruction, and Politics. (3:3:0)

Critical political theory, including writers such as Hegel, Nietzsche, Heidegger, Gadamer, Derrida, and Levinas.

451. Revolution. (3:3:0)

Causes and process of political revolution.

452. Islam and Middle East Politics. (3:3:0)

Influence of the Islamic religion on politics of the Middle East.

453. Political Violence and Terrorism. (3:3:0)

Prerequisite: PISc 200.

Understanding terrorism, insurgency, guerrilla warfare, and other forms of political violence worldwide.

454. Jerusalem: Past, Present and Future. (3:3:0)

Regarded as a key in the process of conflict resolution, Jerusalem in light of its rich political, historical, and religious past, together with its controversial future.

457. Arab-Palestinian-Israeli Conflict. (3:3:0)

Emphasizes historical background, current situation, and alternatives leading to conflict resolution.

470. Intelligence and National Security. (3:3:0) Prerequisite: PISc 200.

Relationship between theory and practice of intelligence and national security of states.

498R. Directed Individual Study. (1-3:3:0 ea.)

Prerequisite: senior status and consent of department chair and instructor.

499. Senior Seminar. (3:2:0) Prerequisite:

enrolled in next-to-last or last undergraduate semester in major.

Research in field of concentration and writing an extensive seminar paper. For majors who plan political science graduate study.

Advanced Undergraduate or Graduate Courses

509R. Advanced Topics in Political Philosophy. (3:3:0 ea.)

Contemporary issues.

518. Election Law and Reform of the Political Process. (3:3:0)

Issues in election law and governmental regulation of elections, campaigns, voting, and political participation.

519R. Advanced Topics in American Government. (3:3:0 ea.)

529R. Advanced Topics in Political Behavior. (3:3:0 ea.)

530. Political Economy. (3:3:0)

Competing theories of the relationship between economics and politics and specific fiscal, monetary, and regulatory policies.

532. Policy Analysis and Methods 1. (3:3:0)

Prerequisite: college algebra and microeconomics.

Policy analytic methods: program evaluation, management information systems, benefit-cost analysis, and decision theory.

533. Policy Analysis and Methods 2. (3:3:0)

Prerequisite: PISc 532.

Policy analytic methods: surveys and optimization models, statistical analyses, simulation, and social choice models.

534. Public Sector Productivity. (3:3:0)

Assessment of government productivity at federal, state, and local levels, including links to budget processes; business management models.

535. Natural Resources Policy. (3:3:0)

Processes and politics of public policies related to natural resources. Problems of analysis and evaluation.

536. Environmental Regulation. (3:3:0)

Regulatory programs aimed at air and water pollution, hazardous waste, toxic chemicals, and other environmental problems. Alternative regulatory mechanisms and approaches.

537. Education Policy. (3:3:0)

Role and public expectations of educational institutions, collection and distribution of financial resources, and productivity and performance assessment.

538. Urban Policy. (3:3:0)

Tension between spatial and social policies, and role of institutional actors.

539R. Advanced Topics in Public Policy. (3:3:0 ea.)

544. Public Policy and the Family. (3:3:0)

Family in political society: specific laws and policies such as divorce, welfare, reproduction, and education.

545. Social Policy. (3:3:0)

Justifications for government intervention in families and individual lives, effectiveness of social policies.

549R. Advanced Topics in Politics. (3:3:0 ea.)

Politics of growth, inequality, ethnicity, and class conflict.

558. Political Economics of Development. (3:3:0)

Uneven distribution of global resources; politics of underdevelopment.

559R. Advanced Topics in Comparative Government. (3:3:0 ea.)

Modernization and political change; comparative legislatures, etc.

569R. Advanced Topics in Law and Justice. (3:3:0 ea.)

570. Advanced Theory of International Relations: Core Readings. (3:3:0)

Theory and research of international relations.

571. Foreign Policy Analysis. (3:3:0)

Prerequisite: PISc 200, 370.

Survey of research regarding multiple levels of foreign policy analysis: individual, group, bureaucratic, societal, economic, and systemic.

572. Continuity and Change in the International Political Economy. (3:3:0)

Dynamics of change in international political economy in post-Cold War period.

578R. Advanced Topics in Foreign Policies. (3:3:0 ea.)

Efforts to secure national security and international stability in a fragile and volatile global environment.

579R. Advanced Topics in International Relations. (3:3:0 ea.)

Relevant contemporary issues.

599R. Cooperative Education: Internship/Field Study. (1-9:0:0 ea.)

Prerequisite: acceptance into program. Internships for master's candidates.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

672. International Trade and Investment. (3:3:0)

680. Theory and Research. (3:3:0)

689R. Directed Individual Study. (1-3:3:0 ea.)

690R. Tutorial in Political Philosophy. (1-3:3:0 ea.)

691R. Tutorial in Politics. (1-3:3:0 ea.)

692R. Tutorial in Empirical Theory. (3:3:0 ea.)

693R. Tutorial in Public Policy. (3:3:0 ea.)

695R. Tutorial in Comparative Government and Politics. (1-3:3:0 ea.)

696R. Tutorial in Public Law. (1-3:3:0 ea.)

697R. Tutorial in International Relations. (1-3:3:0 ea.)

699R. Master's Thesis. (1-6:Arr.:Arr. ea.)

Portuguese

See Spanish and Portuguese.

Psychology

David V. Stimpson, Chair (1001 SWKT)

Professors

- Bednar, Richard L. (1982) BS, MS, Brigham Young U., 1961, 1963; PhD, U. of Minnesota, 1968.
- Bennion, Robert C. (1961) BA, Brigham Young U., 1956; MA, PhD, Ohio State U., 1959, 1961.
- Bergin, Allen E. (1972) BS, MS, Brigham Young U., 1956, 1957; PhD, Stanford U., 1960.
- Bigler, Erin D. (1990) BS, PhD, Brigham Young U., 1971, 1974.
- Brown, Bruce L. (1968) BS, MS, Brigham Young U., 1965, 1968; PhD, McGill U., 1969.
- Bunker, Gary L. (1970) BA, MA, Brigham Young U., 1960, 1961; PhD, U. of California, Berkeley, 1966.
- Cundick, Bert P. (1962) BA, MS, U. of Utah, 1957, 1959; PhD, Ohio State U., 1962.
- Fleming, Donovan E., Dean (1971) BS, MS, Brigham Young U., 1956, 1957; PhD, Washington State U., 1962.
- Furhman, Addie (1992) BS, Utah State U., 1956; MA, Brigham Young U., 1965; PhD, U. of Minnesota, 1969.
- Higbee, Kenneth L. (1970) BS, MS, Brigham Young U., 1965, 1966; PhD, Purdue U., 1970.
- Howell, Robert J. (1952) BA, MA, PhD, U. of Utah, 1948, 1949, 1951.
- Jensen, Larry C. (1965) BS, MS, Brigham Young U., 1960, 1961; PhD, Michigan State U., 1966.
- Lambert, Michael J. (1971) BS, MS, PhD, U. of Utah, 1967, 1968, 1971.
- Miller, Harold L., Jr. (1975) BS, Arizona State U., 1970; PhD, Harvard U., 1975.
- Payne, I. Reed (1964) BS, Brigham Young U., 1956; MS, PhD, Pennsylvania State U., 1958, 1963.
- Pedersen, Darhl M. (1962) BS, MS, Brigham Young U., 1957, 1958; PhD, U. of Illinois, 1962.
- Robinson, Paul W. (1969) BS, MS, PhD, Utah State U., 1965, 1967, 1973.
- Smith, Kay H. (1961) BA, MA, Brigham Young U., 1957, 1958; PhD, Wayne State U., 1962.
- Sorenson, David M. (1969) BA, Brigham Young U., 1961; MEd, EdD, Harvard U., 1962, 1970.
- Stimpson, David V. (1964) BS, MS, Brigham Young U., 1959, 1960; PhD, U. of California, Berkeley, 1964.
- Weight, David G. (1969) BA, MS, Brigham Young U., 1963, 1965; PhD, U. of Washington, 1969.

Associate Professors

- Barlow, Sally H. (1978) BA, MSW, PhD, U. of Utah, 1971, 1973, 1978.
- Bloch, George J. (1989) BA, Brandeis U., 1962; MA, Claremont Graduate School, 1965; PhD, Stanford U., 1968.

- Burlingame, Gary M. (1983) BS, Andrews U., 1978, MS, PhD, U. of Utah, 1981, 1983.
- Wells, Marion Gawain (1972) AS, Dixie Coll., 1964; BS, MS, Brigham Young U., 1967, 1968; PhD, Purdue U., 1972.
- Williams, Richard N. (1981) BS, Brigham Young U., 1974; MS, PhD, Purdue U., 1978, 1981.
- Wood, Larry Eugene (1977) BS, Brigham Young U., 1967; MA, PhD, U. of Iowa, 1970, 1971.

Assistant Professors

- Budge, Harold S. (1960) BS, MS, Utah State U., 1958, 1960; PhD, U. of Utah, 1981.
- Clayton, Claudia J. (1991) BS, Brigham Young U., 1970; PhD, U. of Utah, 1976; PhD, Brigham Young U., 1991.
- Maughan, Michael L. (1972) BS, MS, EdD, Utah State U., 1966, 1968, 1970.
- Orme, G. Craig (1983) BS, MS, PhD, Utah State U., 1972, 1974, 1980.
- Ridge, Robert D. (1992) BS, Brigham Young U., 1987; PhD, U. of Minnesota, 1992.
- Roberts, Tomi-Ann (1990) AB, Smith College, 1985; PhD, Stanford U., 1990.

Assistant Clinical Professor

- Nielsen, Stevan L. (1988) BS, Brigham Young U., 1976; PhD, U. of Washington, 1984.

Emeriti

- Allen, Mark K. (1946) BA, Brigham Young U., 1926; MA, PhD, Stanford U., 1935, 1955.
- Daniels, Philip B. (1961) BS, MS, Brigham Young U., 1954, 1957; PhD, Harvard U., 1962.
- Hardy, Kenneth R. (1954) BA, MA, U. of Utah, 1948, 1949; PhD, U. of Michigan, 1954.
- Robinson, Burton W. (1955) BS, MS, Utah State U., 1951, 1951; PhD, Purdue U., 1954.
- Sullivan, Clyde E. (1981) BA, PhD, U. of California, Berkeley, 1948, 1958.

Programs and Degrees

BS	Psychology
BS	Psychology Teaching
MS	Psychology
Cert	School Psychology
PhD	Psychology
PhD	Clinical Psychology

The Department of Psychology offers a program designed to (1) provide knowledge about human behavior, (2) develop skills in the application of such principles, and (3) expand the frontiers of knowledge through student-faculty research and scholarly activity.

Psychologists engage in teaching, research, and administration and provide counseling, clinical, or consulting services to individuals and organizations. They are employed in colleges and universities; in public and private schools; in clinics, hospitals, and private practice; in business and industry; and in governmental and private agencies. The study of psychology has particular value for those preparing for parenthood or law and is also of value in supporting other

specializations concerned with human behavior.

Most professional positions in psychology require advanced degrees, generally the doctorate, though the bachelor's degree may provide employment in such areas as high school teaching, probation work, junior-level social work, and employment interviewing.

Advisement

Obtain individual academic assistance through the College of Family, Home, and Social Sciences Advisement Center (2254 SFLC).

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

BS Psychology

I. A total of 34 psychology hours is required in the major, 22 of which must be 300-level or above.

II. Psych 111, 301, 302; at least two of 320 (or 321 or 322), 341, 342, 350; at least two of 361, 365, 370, 375 *381-382; 490 (to be taken senior year). Psych 111 is prerequisite to all other psychology courses. Math 110 is prerequisite to Psych 301. It is strongly recommended that 301 and 302 be taken early in the program and that 301 precede 302.

*Note: Behavioral neurobiology is a two-semester course (Psych 381-382). Students may complete either semester to count behavioral neurobiology as fulfilling one requirement in this core area.

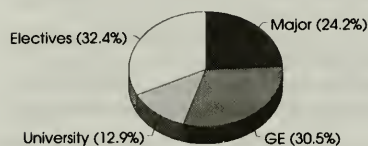
III. No D credit is allowed in major courses.

IV. At least 17 hours of psychology major credit must be taken in residency at BYU. A maximum of 13 hours may be taken as Independent Study (only 8 of which may count as residence hours); 3 hours of 399R; 3 hours of Special Topics in Psychology (390R); and 6 hours via 492R, 495R, and 499R toward the 34-hour total.

To augment the major, courses in other disciplines are recommended that develop skills in analytical thinking, writing, and relevant computer usage. Illustrative courses are Phil 205, Engl 315, 316, and Soc 303.

V. A minor is not required, but students may select one minor or a combination of courses depending on their educational and vocational objectives. If planning to terminate with a bachelor's degree, students should choose courses that broaden their employment opportunities in such areas as secretarial work, recreation, social work, and various branches of business.

Summary of Degree Requirements for BS Psychology



1. Total hours	128.0
2. Major hours *	31.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	41.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Minor

I. Requirements: Psych 111, plus electives from remaining undergraduate and 500-level courses to total 15 hours, 9 of which must be 300 level or above; a maximum 6 hours of Independent Study credit may count toward a minor.

II. No D credit is allowed in the minor.

Note: Behavioral neurobiology is a two-semester course (Psych 381–382). Students choosing to take behavioral neurobiology as part of a psychology minor may complete either course.

BS Psychology Teaching

See Psychology in the Secondary Education section of this catalog for requirements for a major or minor in psychology teaching.

Psychology (Psych)

Undergraduate Courses

*Designates courses containing valuable content related to the Graduate Record Examination (GRE).

111. General Psychology. (3:3:0) Honors and Independent Study also.

Basic course in modern scientific psychology.

170. Understanding and Improving Your Memory. (1:0:0) Independent Study only.

Principles of human learning and memory; study skills and methods for improving memory.

201. Psychology of Music. (3:3:0)

Application of systematic framework of psychology to analysis of music.

211R. Frontiers in Psychology. (3:3:0 ea.)

Contemporary topics not covered in detail in Psych 111.

220. Human Development: Life Span (3:3:0)

Interaction of psychological, biological, and social influences on behavior and psychological development through the life span.

240. Personal and Social Adjustment. (3:3:0) Independent Study also.

Concepts of adjustment and application of psychological principles for coping with stress and interpersonal, emotional, and psychosocial difficulties.

270. Improving Mental Skills. (3:3:0)

Studying, rapid reading, remembering, and problem solving.

***301. Psychological Statistics.** (4:4:0)

Independent Study also. Prerequisite: Math 110.

Descriptive analysis and hypothesis testing applied to psychological research data.

***302. Psychological Research Design and Analysis.** (3:3:0) Prerequisite: Psych 301 or equivalent.

Basic principles of designing, conducting, and reporting psychological investigations.

303. (Psych-FamSc) Parenting. (3:3:0)

Independent Study also.

Theories and skills related to quality parent-child relationships.

306. Sex Roles in the Family and Society. (3:3:0) Independent Study also.

Biological and social contributions to sex role development, sexual self-concept, and complementarity of sex roles.

308. The Psychology of Women. (3:3:0)

Overview of current theory and research in psychology of women: biological influences, gender learning, sexuality, health, victimization, work, gender sameness and difference.

***320. Developmental Psychology:**

Childhood. (3:3:0) Independent Study also. Prerequisite: Psych 111 or instructor's consent.

Physical, mental, emotional, and social development of the child.

321. Developmental Psychology: Adolescence. (3:3:0) Independent Study also.

Development and maturation during adolescence; research methodology.

322. Developmental Psychology:

Adulthood. (3:3:0) Independent Study also.

Stability and change in psychological, physiological, and interpersonal processes through early, middle, and late adulthood.

330. Organizational Psychology. (3:3:0)

Independent Study also.

Personal, interactional, and structural aspects of organizations, motivation, decision making, problem-solving, communication, leadership, organizational structure, change. Students taking this class should not take OrgB 321.

336. Personnel Psychology. (3:2:2)

Prerequisite: Psych 111.

Employment interviewing techniques; validation of psychological tests and biographical questionnaires; supervised experience in testing, job analysis, interviewing; exposure to current personnel programs.

338. Sport Psychology. (3:3:0)

Application of psychological principles to sporting activities.

***341. Personality.** (3:3:0) Independent Study also.

Individual patterns of behavior, thought, and emotion; personality theories and their associated strategies of research, assessments, and personality change.

***342. Abnormal Psychology.** (3:3:2)

Prerequisite: Psych 111.

Dynamics of maladjustment; major psychological disorders and therapeutic procedures. Fieldwork.

343. Child Psychopathology. (3:3:0)

Mental disorders of childhood.

346. Exceptional Children. (3:3:0)

Independent Study also.

Exceptionalities and their psychological significance; gifted, mentally retarded, and physically and emotionally handicapped children.

348. Clinical Psychology. (3:3:0)

Personality theories, psychopathology, diagnostic interviewing and testing, psychotherapy techniques; research methods. Not a practicum.

***350. (Psych-Soc) Introduction to Social Psychology.** (3:3:0) Independent Study also.

Conformity and obedience; socialization, norms, roles; attitudes, leadership, group processes.

353. LDS Perspectives and Psychology. (3:3:0)

Relationships between theories of psychology and LDS thought.

354. Psychology of Religion. (3:3:0)

Classification of religious behavior and experience; source of religious motivation; religion and the growth process.

357. (Psych-Soc) Interpersonal Growth and Group Processes. (3:1:4) Independent Study also.

Effective interpersonal relationships and group functioning.

358. Leadership Development. (3:2:2) Independent Study also.

Principles and practices of successful leadership: decision making, communications, planning, team building, motivation, and interpersonal skills.

359. Environmental Psychology. (3:3:0)

Independent Study also. Prerequisite: Psych 111.

Interaction between people and their physical context.

***361. Principles of Learning.** (3:3:0)

Principles of learning; representative experiments.

***365. Motivation.** (3:3:0)

Determinants of motivation, relationship of motives to emotion, thought, personality, and action. Implications for understanding self and others.

***370. Sensation and Perception.** (3:3:0)

Sensory basis of perception and principles of perceptual organization.

***375. Cognition.** (3:3:0)

Perceptual organization; information processing; cognitive development; relationships between sensory analysis, perception, memory, learning, language, and problem solving.

376. Psychology, Language, and Culture. (3:3:0)

Principles of linguistics and their implications for cognitive theory; social psychology of language and culture; nonverbal communication.

378. Psychological Testing. (3:3:0)

Construction and validation of standardized psychological tests.

381. Behavioral Neurobiology 1. (3:3:0)

Basic physiological, anatomical, and chemical foundations of psychology.

382. Behavioral Neurobiology 2. (3:3:0)

Recommended: Psych 381.
Continuation of Psych 381.

386R. Behavioral Neurobiology Laboratory. (1–3:Arr:Arr. ea.) Prerequisite: Psych 381, 382 or concurrent registration and instructor's consent.

390R. Special Topics in Psychology. (1–3:3:0 ea.) Prerequisite: instructor's consent.

399R. Cooperative Education. (1–9:Arr:Arr. ea.) Prerequisite: Psych 111 and departmental approval. Available as credit *only* for participation in Washington Seminar.

490. Senior Seminar. (3:2:1) Prerequisite: senior standing.

Survey, historical development, and comparative analysis of principal issues in contemporary psychology.

492R. Supervised Instructional or Research Experience. (1–3:0:0 ea.) Prerequisite: instructor's invitation to register.

Course-related instructional activities or laboratory/field research.

495R. Independent Readings. (1–3:Arr:Arr. ea.) Independent Study also. Prerequisite: instructor's consent.

499R. Independent Research. (1–3:0:0 ea.) Prerequisite: instructor's consent.

Advanced Undergraduate or Graduate Courses

500R. Research Methods. (3:3:0 ea.)

Intermediate course for first-year graduate psychology students, focusing on methodological tactics rather than statistical skills.

501. Data Analysis in Psychological Research 1. (5:4:2) Prerequisite: Psych 301 or Stat 222; or Stat 221, 223.

Using and interpreting major quantitative methods in psychology; some commonly used computer methods.

502. Data Analysis in Psychological Research 2. (5:4:2) Prerequisite: Psych 501 or instructor's consent.

Analysis of variance and covariance, multiple regression, and experimental design; introduction to multivariate methods.

***510. History and Systems of Psychology.** (3:3:0)

Survey of origins and development of modern psychology, including consideration of the schools and theoretical systems.

511. Philosophy of Science for the Social Sciences. (3:3:0) Prerequisite: instructor's consent or admission to PhD program.

Issues in philosophy of science as they apply to social sciences, including methods, epistemology, and construction of knowledge.

520. Advanced Developmental Psychology. (3:3:0)

Major research in developmental psychology, emphasizing theory, content, and methodology.

531. Organizational Psychology. (3:3:0)

Personal and interpersonal aspects of organizational life: goal setting, decision making, problem solving, communication, control, leadership, motivation, and change.

535. Behavior Modification Techniques. (3:2:2)

Practical application of behavior modification to academic discipline; emotional target behaviors of individuals and groups.

540. Personality Theory. (3:3:0) Prerequisite: Psych 341 and 5 additional hours in psychology.

Contemporary theories of personality developed within the framework of major psychological systems.

550. Theory and Research in Social Psychology. (3:3:0) Prerequisite: Psych-Soc 350 or instructor's consent.

Current theories and research on interaction with others.

555. Group Dynamics. (3:3:0) Prerequisite: Psych-Soc 350.

Theories and research on small-group processes and mass behavior.

560. Learning Theory. (3:3:0) Prerequisite: Psych 361 and 5 additional hours in psychology.

Critical review of current theories and persistent problems.

565. Motivational Psychology. (3:3:0) Prerequisite: Psych 365 or equivalent; graduate standing or instructor's consent.

Theoretical, historical, and empirical overview; recent trends and issues; role of animal studies; methodological problems.

575. Cognitive Processes. (3:3:0) Prerequisite: Psych 370, 375, or equivalent; graduate standing or instructor's consent.

Major theoretical and empirical developments. Interaction of sensory, perceptual, learning, and thinking processes.

577. (Psych-CS 535) Human-Computer Interaction. (3:3:0) Prerequisite: graduate or senior standing.

Human/machine interfaces for hardware/software integration. Psychological principles of computer interfacing. Human engineering, ergonomics, and software design principles for user-friendly applications.

583. Biological and Health Psychology. (3:3:0) Prerequisite: Psych 381, 382, or equivalent.

In-depth examination of biological bases of behavior from perspective of health and disease.

584. (Psych-Zool) Neurophysiology. (3:3:0) Prerequisite: Zool 460 or equivalent.

Physiology of nerve cells and neuronal interactions.

585. Human Neuropsychology. (3:3:0) Prerequisite: Psych 381, 382, or instructor's consent.

Critical study of brain-behavior relationships.

586. Hormones and Behavior. (3:3:0) Prerequisite: Psych 381, 382.

Neural and endocrine mechanisms underlying behavior.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

- 600R. Seminar in Research Methods. (3:3:Arr. ea.)
605. Professional Seminar in Psychology. (1:1:0)
606. Professional and Ethical Issues in Psychology. (1:1:0)
607. Research Prospectus Development. (1:1:0)
609. Professional and Ethical Issues in Clinical Psychology. (3:3:3)
610. Theory and Philosophy in Psychology. (3:3:0)
611. Psychopathology 1: Adult. (4:4:2)
612. Psychopathology 2: Developmental. (3:3:2)
622. Assessment 1: Intelligence. (3:2:3)
623. Assessment 2: Objective. (3:2:3)
624. Assessment 3: Projective. (3:2:3)
625. Advanced Objective Assessment. (3:2:3)
631. Professional Issues in Organizational Psychology. (3:3:0)
637. Social Psychology of Groups. (3:3:3)
- 640R. Seminar in Personality. (3:3:0 ea.)
- 641R. Values and Mental Health. (1–3:Arr.:0 ea.)
644. Rorschach Techniques. (3:2:5)
645. Cultural Diversity and Gender Issues. (3:3:0)
- 648R. Seminar in Theoretical/ Philosophical Psychology. (3:3:0 ea.)
- 650R. Seminar in Social Psychology. (3:3:0 ea.)
651. Psychotherapy 1: Interviewing Skills. (3:3:2)
652. Psychotherapy 2: Adult. (3:3:2)
653. Psychotherapy 3: Child and Family. (3:3:2)
654. Psychotherapy 4: Adult Group. (3:3:2)
655. (Psych-Soc 630) Attitude Measurement and Change. (3:3:0)
658. Practicum: Designing Training Programs. (3:2:2)
- 660R. Seminar in Learning. (3:3:0 ea.)
- 667R. Seminar in Experimental Analysis of Behavior. (3:3:0 ea.)
675. Personality Dynamics. (3:3:0)
- 677R. Seminar in Cognitive Processes. (3:3:0 ea.)

- 678R. Seminar in Mathematical Psychology. (3:3:0 ea.)
680. Clinical Neuropsychology. (3:3:0)
684. Advanced Behavioral Neurobiology. (3:3:0)
- 685R. Seminar in Behavioral Neurobiology. (3:3:0 ea.)
- 687R. Seminar in Psychopharmacology. (3:0:0 ea.)
- 691R. Intervention Techniques in the Schools. (3:2:4 ea.)
- 692R. Special Topics in School Psychology. (2:2:2 ea.)
- 695R. Independent Readings. (1–3:Arr.:Arr. ea.)
- 696R. Field Project. (2–6:Arr.:Arr. ea.)
- 699R. Master's Thesis. (1–9:Arr.:Arr. ea.)
- 710R. Readings in Clinical Psychology. (1–3:3:0 ea.)
- 711R. Topics in Clinical Psychology. (0.5–3:Arr.:0 ea.)
- 712R. Topics in Neuropsychology. (3:3:0 ea.)
- 740R. Case Conference. (0.5:0.5:0 ea.)
- 741R. Integrative Practicum. (1–3:0:6 ea.)
- 742R. Projects in Clinical Psychology. (3:0:8 ea.)
- 743R. Clerkship. (1–3:0:6 ea.)
- 745, 746, 747, 748. Clinical Internship. (2:0:40 ea.)
- 797R. Independent Research. (1–4:0:12 ea.)
- 799R. Doctoral Dissertation. (1–9:Arr.:Arr. ea.)

Range Science

See Botany and Range Science.

Recreation Management and Youth Leadership

Howard R. Gray, Chair (273-C RB)

Professors

- De Hoyos, Benjamin F. (1961) BS, MA, Brigham Young U., 1956, 1961; PhD, U. of Utah, 1969.
- Gray, Howard R. (1979) BS, MA, Brigham Young U., 1969, 1970; PhD, Pennsylvania State U., 1977.
- Naylor, Jay H. (1959) BS, MS, Brigham Young U., 1958, 1959; EdD, U. of Utah, 1973.

- Smith, S. Harold (1988) BS, Brigham Young U., 1967; MS, U. of Washington, 1968; PhD, U. of Utah, 1974.
- Thorstenson, Clark T. (1969) BS, MRE, Brigham Young U., 1962, 1965; PhD, U. of Utah, 1969.

Associate Professors

- Catherall, Thomas S. (1971) BS, MA, EdD, Brigham Young U., 1965, 1975, 1980.
- Olsen, Burton K. (1965) BS, MS, Brigham Young U., 1963, 1964; PhD, U. of Minnesota, Minneapolis, 1970.
- Skinner, Rulon Dean (1969) AA, Eastern Arizona Coll., 1950; BA, MA, Brigham Young U., 1954, 1971.

Associate Professionals

- Holley, Bruce F. (1974) BS, MA, Brigham Young U., 1972, 1974.
- Parker, Glen Clair (1981) BS, MS, Brigham Young U., 1974, 1983.

Assistant Professors

- Hansen, John L. (1966) BS, MRE, Brigham Young U., 1964, 1966.
- Nelson, Douglas C. (1976) BS, MRE, Brigham Young U., 1973, 1976.
- Palmer, Gary K. (1968) BS, MRE, EdD, Brigham Young U., 1966, 1967, 1981.

Instructor

- Jensen, Patricia (1992) BA, Wake Forest U., 1978; MA, Brigham Young U., 1985.

Emeriti

- Hafen, William J. (1954) AS, Snow Coll., 1948; BS, Brigham Young U., 1950; MA, Washington State U., 1953; EdD, U. of Utah, 1968.
- Heaton, Alma (1953) BS, MS, Utah State U., 1950, 1951.
- Heaton, Israel C. (1956) BS, MS, Utah State U., 1940, 1941; ReD, U. of Indiana, 1955.
- Packer, Thane J. (1959) BS, Utah State U., 1939; MS, Brigham Young U., 1953; EdD, U. of Utah, 1974.

Programs and Degrees

- | | |
|----|--|
| BS | Recreation Management and Youth Leadership |
| | Emphases: |
| | Administration |
| | Outdoor Recreation |
| | Therapeutic Recreation |
| | Youth Agency Administration |
| | Boy Scouts of America Administration |
| | Youth Leadership |
| MA | Recreation Management and Youth Leadership |

The subject matter will prepare students to professionally assist and give direction to programs designed to fill the leisure needs of individuals, families, youth, and other groups. Areas of employment include community recreation; private, commercial, industrial, and military recreation; youth agencies and Scouting; hospitals and nursing homes; government agencies; and state and local school districts. Students

may obtain a recreation major, minor, or teaching minor.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All Degree Programs in Recreation Management and Youth Leadership

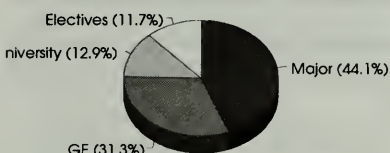
RMYL 299R, 305, 399R, 487, and computer competency.

BS Recreation Management and Youth Leadership

In addition to above core requirements, one of the following six emphases:

I. Administration Emphasis: RMYL 123, 210, 311, 312, 313R, 315, 316, 400, 423, 481, 483, 485, 490, 491, 493, 495, PE 100-level individual activity classes (2 hours), Hlth 320.

Summary of Degree Requirements for Administration Emphasis

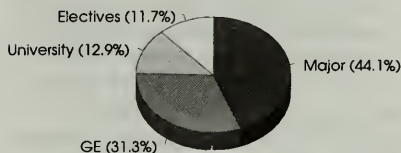


1. Total hours 128.0
2. Major hours 56.5
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 15.0
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

II. Outdoor Recreation Emphasis: RMYL 123, 210, 223R (4 hours), 311, 312, 313R, 315, 316, 400, 423, 425, 481, 485, 491, Hlth 320, and 6 hours of electives or a complementary minor.

Summary of Degree Requirements for Outdoor Recreation Emphasis

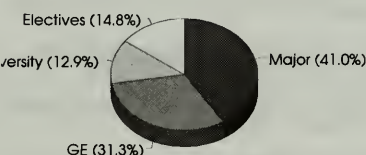


1. Total hours 128.0
2. Major hours 56.5
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 15.0
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

III. Therapeutic Recreation Emphasis: RMYL 210, 311, 313R, 315, 370, 471, 472, 481, 485, Hlth 320, Psych 342, Soc 329, Zool 205, 260, PE 100-level individual activity classes (2 hours).

Summary of Degree Requirements for Therapeutic Recreation Emphasis



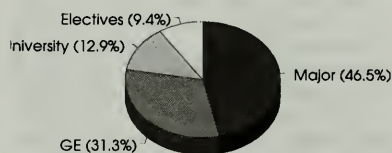
1. Total hours 128.0
2. Major hours 52.5
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 19.0
6. 40 hours upper-division GPA requirement of 2.0

7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

IV. Youth Agency Administration Emphasis: RMYL 201R (2 hours), 278, 279R, 306, 311, 332, 344, 371, 373, 375, 378, 400, 402R, 492, RelC 491, and 6.5 hours electives.

Summary of Degree Requirements for Youth Agency Administration Emphasis

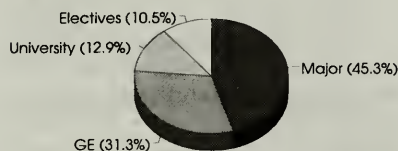


1. Total hours 128.0
2. Major hours 59.5
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 12.0
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

V. Boy Scouts of America Administration Emphasis: RMYL 201R, 278, 279R, 306, 332, 344, 371, 372R, 373, 375, 378, 400, 401R, 402R, 492, RelC 491.

Summary of Degree Requirements for Boy Scouts of America Administration Emphasis

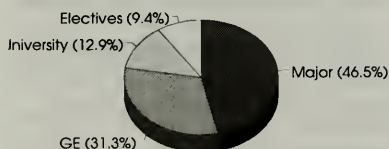


1. Total hours 128.0
2. Major hours 58.0
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 13.5
6. 40 hours upper-division
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

VI. *Youth Leadership Emphasis: RMYL*
201R, 306, 311, 332, 344, 371, 373, 375, 378, 400, 402R, 492, RelC 491, and 10.5 hours of electives selected by student and advisor.

Summary of Degree Requirements for Youth Leadership Emphasis



1. Total hours 128.0
2. Major hours 59.5
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 12.0
6. 40 hours upper-division
- GPA requirement of 2.0

7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Recreation Management and Youth Leadership (RMYL)

Undergraduate Courses

123. Introduction to Outdoor Recreation. (2:1:3)

Participation in a variety of outdoor activities. Fee.

201R. Agency Skills Training. (1:1:0 ea.)

Varied outdoor skills for the youth agency setting (campfire activities, outdoor cooking).

210. Careers in Recreation. (1:2:0) Fee.

223R. Outdoor Recreation Skills. (2:2:4 ea.)

In-depth approach to leadership skills in selected outdoor specialty areas, including kayaking and kayak construction, fishing, cross-country skiing and winter skills, etc. Fee.

278. Basic Backpacking. (1:1:2)

Elementary principles of backpacking, including cooking, safety, sanitation, and equipment.

279R. Backpacking Leadership. (1:1:1 ea.)

Prerequisite: RMYL 278 or instructor's consent.

Logistics and administration of moving camp-type programs providing TripCrafter certification by the American Camping Association.

299R. Cooperative Education: Leadership Practicum. (1-4:1:50 ea.)

Prerequisite: instructor's consent.

On-the-job experience.

305. Financial Management. (3:3:0)

Financing recreation management and youth leadership facilities and services.

306. Youth Agency Administrative Functions. (3:3:0)

Organizational and operational practices of youth agencies on the administrative level.

311. Leisure in Contemporary Society. (3:3:0)

Problems and opportunities resulting from the leisure era.

312. Recreation for Special Populations. (1:2:0)

Theoretical and practical methods of working with the handicapped.

313R. Seminar in Professionalism. (0.5:1:0 ea.) Prerequisite: junior or senior standing.

Noted professionals and agencies statewide discuss their programs.

315. Social Recreation Leadership. (3:2:2)

Leadership skills for directing large social groups.

316. Crafts for Recreation. (2:1:3)

Administering and developing hobby craft skills for the recreation practitioner.

323. Basic Rock Climbing. (2:1:3)

Rock climbing. Free and aid climbing, route selection, safety, rescue, etc.

332. Community Relationships. (3:3:0)

Independent Study also.

Directing community resources toward the needs of youth.

344. Introduction to Youth Leadership (2:2:0) Independent Study also.

Role of youth leadership within the American culture; career opportunities.

370. Introduction to Therapeutic Recreation. (3:2:2)

Agencies, services, programs, and practices related to therapeutic recreation.

371. Youth Meetings, Activities, and Conferences. (2:0:0) Independent Study also.

Planning and organizing youth and other conferences related to youth agency service.

372R. Youth Agency Programming. (2:2:0 ea.)

Comparative study of related youth agency programs for preadolescents, early adolescents, and late adolescents.

373. Practicum in Volunteer Leadership. (2:1:5)

Participation with a youth-serving agency in a volunteer leadership capacity.

375. Executive Dynamics. (3:3:0)

Executive leadership and personal growth practices calculated to meet executive leadership demands.

378. Camping Skills. (2:2:3)

Advanced outdoor skills and camp program planning for youth leaders. American Camping Association certification possible.

380. Outdoor Survival Skills. (2:2:1)

Training to meet the adversity of primitive living without use of modern equipment and facilities. Fee.

382. High Country Backpacking. (2:0:4)

Laboratory experience occasionally requiring overnight participation.

384. Intramural Administration. (2:2:1)

Administrative procedures for intramural and recreational activities.

399R. Cooperative Education: Internship. (1-8:1:Arr. ea.)

Prerequisite: RMYL 481 and instructor's consent.

On-the-job training.

400. Keys to Leadership. (3:3:1)

Individualized experience designed to develop leadership skills through structured interaction and application of leadership principles. Fee.

401R. Youth Agency Staff Training. (1:1:1 ea.)

Preparation for selected leadership assignments in agency summer camps and related programs.

402R. Outdoor Leadership Practicum.

(1–4:0:8 ea.) Prerequisite: instructor's consent.

Administrative experience in positions of staff leadership with selected youth agencies.

423. Management of Outdoor Systems.

(2:2:Arr.)

Administering camps and outdoor programs; site selection and development; program planning and staffing.

425. Issues in Outdoor Recreation. (2:2:0)

Role of outdoor recreation in modern society, including government and nongovernment functions.

471. Assessment in Therapeutic Recreation.

(3:2:3) Prerequisite: RMYL 370, 470, or equivalent.

Patient assessment, treatment plan development, and counseling procedures.

472. Program Dynamics in Therapeutic Recreation. (3:2:3) Prerequisite: RMYL 370,

470, or equivalent.

Modular approach to program development for the handicapped.

480. Personal Development Survival.

(1–5:3:0) Prerequisite: instructor's consent.

Living experience course for thirty days in physical and emotional stress situations designed to produce positive interpersonal commitments. Fee.

481. Program Management. (3:3:0)

Prerequisite: RMYL 210, 311, 315.

Organizing and administering community programs.

483. Public Facility Management. (2:2:0)

Understanding public facility management: stadium, arena, convention center, performing arts center, etc. Box office, security, staging, food service, utilities, housekeeping, crowd management, event coordination, promotion, contracts, television, lighting, sound, press relations, etc.

485. Management of Recreation Services.

(3:3:0) Prerequisite: RMYL 210, 311, 315.

Personnel, financing, legal aspects, and city and departmental organization of recreation systems.

487. Research and Evaluation. (2:2:0)

Prerequisite: RMYL 481 or instructor's consent.

Academic and practical training to assess community recreational needs.

490. Aging and Leisure. (2:2:0) Independent Study also.

Understanding recreation and leisure services for the aging and aged in both community and institutional settings.

491. Recreation Facility Planning. (2:2:0)

Developing facilities for public and private recreation programs.

492. Seminar. (1:1:0)

493. Park Planning and Development. (2:2:0)

495. Recreation and Community Education. (2:2:1) Independent Study also.

History, organization, funding, leadership, facilities, and value of the community school.

Advanced Undergraduate or Graduate Course

599R. Internship. (1–8:1:40 ea.) Prerequisite:

instructor's consent.

Professional leadership practicum.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

610. Research Methods in Recreation. (3:3:0)

611. Philosophical Foundations in Recreation. (3:3:0)

615. Process Facilitation in Recreation. (2:2:0)

619. Needs Assessment in Community Planning. (3:3:Arr.)

650. Issues in Leisure and Recreation. (3:3:0)

680. Public Relations and Communications in Recreation Management. (2:2:0)

685. Recreation Administration. (3:3:0)

694. Readings in Recreation Literature and Research. (2:2:0)

699R. Master's Thesis. (1–9:Arr.:Arr. ea.)

Religious Education

Ancient Scripture

Stephen E. Robinson, Chair (375-A JSB)

Professors

Anderson, Richard L. (1955) BA, MA, Brigham Young U., 1951, 1957; JD, Harvard U., 1954; PhD, U. of California, Berkeley, 1962.

Brown, S. Kent (1971) BA, U. of California, Berkeley, 1967; PhD, Brown U., 1972.

Condie, Spencer J. (1969) BA, Brigham Young U., 1964; MA, U. of Utah, 1965; PhD, U. of Pittsburgh, 1969.

Griggs, C. Wilfred (1972) BA, MA, Brigham Young U., 1966, 1968; PhD, U. of California, Berkeley, 1978.

Jackson, Kent P. (1980) BA, Brigham Young U., 1974; MA, PhD, U. of Michigan, 1976, 1980.

McConkie, Joseph F. (1977) BS, MA, EdD, Brigham Young U., 1965, 1968, 1973.

Nyman, Monte S., (1966) BS, MS, Utah State U., 1952, 1958; EdD, Brigham Young U., 1965.

Peterson, H. Donl (1964) BS, MEd, Brigham Young U., 1954, 1960; EdD, Washington State U., 1965.

Robinson, Stephen E., (1986) BA, Brigham Young U., 1971; PhD, Duke U., 1978.

Tate, Charles D. (1960) BS, MS, Utah State U., 1954, 1958; PhD, U. of Colorado, 1966.

Associate Professors

Benson, Reed Amussen (1978) BS, MA, EdD, Brigham Young U., 1953, 1975, 1981.

Hoskisson, Paul Y. (1981) BA, MA, Brigham Young U., 1969, 1973; PhD, Brandeis U., 1986.

Ludlow, Victor L. (1972) BA, Brigham Young U., 1968; PhD, Brandeis U., 1979.

Madsen, John M. (1987) BS, Washington State U., 1963; MEd, EdD, Brigham Young U., 1966, 1978.

Millet, Robert L., Dean (1983) BS, MS, Brigham Young U., 1971, 1973; PhD, Florida State U., 1983.

Ogden, Kelly (1984) BA, Weber State Coll., 1971; MEd, Brigham Young U., 1974; MA, Inst. of Holy Land Studies, 1978; PhD, U. of Utah, 1982.

Parrish, Alan K. (1984) BS, MBA, Utah State U., 1968, 1972; EdD, U. of Southern California, 1981.

Reeve, Rex C., Jr. (1981) BS, MS, EdD, Brigham Young U., 1961, 1962, 1974.

Assistant Professors

Ball, Terry B. (1992) BS, MA, PhD, Brigham Young U., 1979, 1990, 1992.

Draper, Richard D. (1988) BS, Brigham Young U., 1968; MA, Arizona State U., 1974; PhD, Brigham Young U., 1988.

Largey, Dennis L. (1989) BA, Church Coll. of Hawaii, 1972; MA, EdD, Brigham Young U., 1976, 1981.

Merrill, Byron (1991) BA, Brigham Young U., 1972; JD, U. of California, Davis, 1975.

Seely, David R. (1987) BA, MA, Brigham Young U., 1981, 1982; AM, PhD, U. of Michigan, 1985, 1990.

Skinner, Andrew C. (1992) BS, U. of Colorado, 1975; BA, Iliff Sch. of Theology, 1978; MTh, Harvard U., 1980; PhD, U. of Denver, 1986.

Sommerfeldt, Vern (1991) BA, MA, PhD, Brigham Young U., 1972, 1980, 1988.

Williams, Clyde (1991) BS, MEd, EdD, Brigham Young U., 1974, 1978, 1989.

Emeriti

Bankhead, Reid E. (1948) BS, U. of Utah, 1947; M.T., Brigham Young U., 1949.

Clark, James R. (1938) BA, MA, Brigham Young U., 1936, 1944; EdD, Utah State U., 1958.

- Felt, Paul E. (1957) BA, Brigham Young U., 1942; MS, U. of Utah, 1954.
- Harris, James R. (1966) BS, MA, EdD, Brigham Young U., 1952, 1958, 1965.
- Horton, George A., Jr. (1983) BS, MS, Brigham Young U., 1953, 1957; EdD, U. of California, Los Angeles, 1969.
- Matthews, Robert J., (1955) BS, MS, PhD, Brigham Young U., 1955, 1960, 1968.
- Meservy, Keith H. (1958) BA, Brigham Young U., 1951; MA, Johns Hopkins U., 1966.
- Nibley, Hugh W. (1946) BA, U. of California, Los Angeles, 1934; PhD, U. of California, Berkeley, 1938.
- Parsons, Robert Ernest (1964) BS, MS, Brigham Young U., 1954, 1957.
- Patch, Robert C. (1949) BA, U. of New Mexico, 1945; MA, PhD, Brigham Young U., 1949, 1964.
- Rasmussen, Ellis T. (1951) BS, MA, PhD, Brigham Young U., 1942, 1951, 1967.
- Shields, L. Grant (1970) BA, M.R.E., DRE, Brigham Young U., 1949, 1968, 1976.
- Skousen, W. Cleon (1967) JD, George Washington U., 1940.
- Taylor, Hal L. (1969) BS, MS, Brigham Young U., 1951, 1962.
- Turner, Rodney (1956) BA, MA, Brigham Young U., 1949, 1953; EdD, U. of Southern California, 1960.

Ancient Scripture

Undergraduate Courses

Asterisk (*) denotes core courses.

- 101. Old Testament Survey.** (2:1.5:3) Su
Survey of the Old Testament, integrated with extensive field study in the biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies summer term program.

***111. New Testament Survey of the Gospels.** (2:1.5:3) Su

Survey of the New Testament Gospels integrated with extensive field experience in the biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies summer term program.

115. Keys to Scripture Study. (2:2:0) F, W

A guide to more effective scripture study through consideration of principles, concepts, skills, study aids, and sources common to all of the standard works.

***121, 122. Introduction to the Book of Mormon.** (2:2:0 ea.) F, W, Sp, Su Independent study also.

Origin and teachings of the Book of Mormon. *Returned missionaries should register for RelA. 421, 422.*

***200. New Testament Studies.** (1–4:4:0) F, W
Integrated study of the New Testament and LDS history and prophecy in the biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies semester program.

***211, 212. The New Testament.** (2:2:0 ea.) F, W, Sp, Su Independent Study also.
RelA. 211 deals with the Gospels. RelA. 212 deals with the Book of Acts, the Epistles, and the Apocalypse (Revelation).

300. Old Testament Studies. (2:1.5:3) F, W, Su
Study of the Old Testament integrated with extensive field experiences in the biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies semester and summer term programs.

301, 302. The Old Testament. (2:2:0 ea.) F, W, Sp, Su Independent Study also.
Introduction to the structure and teachings of the Old Testament. RelA. 301 covers Genesis through 2 Samuel. RelA. 302 covers 1 Kings through Malachi.

303. Old Testament Studies. (3:3:4) F, W
Study of the Old Testament integrated with extensive field experiences in the biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies semester program.

304. Writings of Isaiah. (2:2:0) F, W, Independent Study also.
Historical, prophetic, doctrinal, and literary values of Isaiah, emphasizing latter-day interpretation and application.

***310. New Testament Studies of the Gospels.** (2:1.5:3) Su
Study of the New Testament Gospels integrated with extensive field experience in the biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies summer term program.

***311. New Testament Studies of the Gospels.** (3:2:4) F, W,
Study of the New Testament Gospels integrated with extensive field experiences in the biblical world; leads to understanding, appreciation, and application of scriptural teachings today. Offered as part of Jerusalem Center for Near Eastern Studies semester program.

320. History and Contribution of Joseph Smith's Translation of the Bible. (2:2:0) F, W
Historical significance of Joseph Smith's translation of the Bible, its relationship to the other standard works, and its doctrinal contributions.

327. The Pearl of Great Price. (2:2:0) F, W, Sp, Su Independent Study also.

Origin and content of the Pearl of Great Price.

392R. Special Studies in Religion: Ancient Scripture. (1:1:0 ea.) F, W, Sp, Su Independent Study also.

Topical studies in religion based on student interest and teacher expertise.

***421, 422. Introduction to the Book of Mormon.** (2:2:0 ea.) F, W, Sp, Su

Origin and teachings of the Book of Mormon (for returned missionaries and mature students).

Advanced Undergraduate or Graduate Courses

501. Analysis of the Old Testament: The Pentateuch and Historical Books. (3:3:0)

502. Analysis of the Old Testament: Prophetic Books. (2:2:0)

503. Analysis of the Old Testament: Poetic and Wisdom Literature. (2:2:0)

510R. Special Topics in Ancient Scripture. (1–3:3:0 ea.) Seminars and Institutes personnel only. No more than 3 hours may apply toward a graduate degree.

Subjects and questions typically addressed by Church Educational System instructors.

511. The Gospels. (2:2:0)

512. Paul's Life and Letters. (2:2:0)

513. The General Epistles and Revelation. (2:2:0)

514. Historical Background of the New Testament. (2:2:0)

521, 522. Analysis of the Book of Mormon. (3:3:0 ea.)

523. External Evidence of the Book of Mormon. (2:2:0)

527. History and Doctrines of the Pearl of Great Price. (3:3:0)

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

606. The Apocrypha and Pseudepigrapha. (2:2:0)

610R. Graduate Seminar in Ancient Scripture. (1–3:3:0 ea.)

620R. Directed Readings in Ancient Scripture. (1–3:3:0 ea.)

Church History and Doctrine

Leon R. Hartshorn, Chair (375-B JSB)

Professors

- Black, Susan Easton (1978) BA, Brigham Young U., 1966; MA, California State Coll., San Bernardino, 1975; EdD, Brigham Young U., 1978.
- Bowen, Walter D. (1964) BS, MS, EdD, Brigham Young U., 1957, 1958, 1965.
- Cannon, Donald Q., Associate Dean (1973) BA, MA, U. of Utah, 1961, 1962; PhD, Clark U., 1967.
- Cowan, Richard O. (1961) BA, Occidental Coll., 1958; MA, PhD, Stanford U., 1959, 1961.
- Dahl, Larry E., Associate Dean (1978) BEd, U. of Alberta, Canada, 1961; MRL, EdD, Brigham Young U., 1968, 1971.
- Esplin, Ronald K. (1980) BA, U. of Utah, 1969; MA, U. of Virginia, 1970; PhD, Brigham Young U., 1981.
- Hartshorn, Leon R. (1965) BS, MS, Brigham Young U., 1956, 1959; EdD, Stanford U., 1965.
- Johnson, Clark V. (1979) BA, Utah State U., 1963; MA, PhD, Brigham Young U., 1969, 1977.
- Perkins, Keith W. (1975) BA, Arizona State U., 1959; MA, PhD, Brigham Young U., 1970, 1974.
- Porter, Larry C. (1970) BS, Utah State U., 1957; MA, PhD, Brigham Young U., 1966, 1971.

Senior Research Historian

- Jessee, Dean C. (1980) BA, MA, Brigham Young U., 1956, 1959.

Associate Professors

- Anderson, A. Gary (1971) BS, U. of Utah, 1958; MS, EdD, Brigham Young U., 1960, 1968.
- Brinley, Douglas E. (1990) BS, MS, Utah State U., 1964, 1966; PhD, Brigham Young U., 1975.
- Caldwell, C. Max (1978) BS, U. of Utah, 1958; MA, Brigham Young U., 1971.
- Choi, Dong Sull (1987) BA, Korea U.; MA, PhD, Brigham Young U., 1984, 1990.
- Garrett, H. Dean (1985) BS, MS, Utah State U., 1967, 1969; EdD, Brigham Young U., 1974.
- Keller, Roger R. (1989) BA, U. of Colorado, 1968; MDiv, Princeton Theological Seminary, 1971; PhD, Duke U., 1975.
- LeBaron, E. Dale (1986) BS, MA, PhD, Brigham Young U., 1963, 1965, 1972.
- Otten, Leauon G. (1972) BS, MEd, Brigham Young U., 1959, 1965.
- Pace, George W. (1970) BA, Brigham Young U., 1960; MA, Colorado State U., 1963; DRE, Brigham Young U., 1976.
- Peterson, Paul H. (1984) BA, MA, PhD, Brigham Young U., 1966, 1972, 1981.
- Van Orden, Bruce A. (1986) BA, MA, PhD, Brigham Young U., 1970, 1975, 1986.
- Wright, Raymond S., III (1990) BA, MA, PhD, U. of Utah, 1967, 1973, 1977.

Research Historian

- Jensen, Richard L. (1980) BA, Utah State U., 1968; MA, Ohio State U., 1972.

Assistant Professors

- Durrant, George D. (1989) BA, MA, EdD, Brigham Young U., 1957, 1964, 1971.
- Garr, Arnold (1991) BA, Weber State Coll., 1969; MA, Utah State U., 1974; PhD, Brigham Young U., 1986.
- Perkins, Jerome M. (1992) BA, MEd, PhD, Brigham Young U., 1971, 1977, 1989.
- Sperry, Kip (1991) BS, MLS, Brigham Young U., 1970, 1974.
- Top, Brent (1987) BA, MEd, PhD, Brigham Young U., 1976, 1980, 1984.
- Toronto, James A. (1992) BA, MEd, Brigham Young U., 1975, 1980; MA, PhD, Harvard U., 1984, 1992.

Emeriti

- Andersen, Wilson Kay (1962) BS, U. of Utah, 1949; MEd, Brigham Young U., 1957.
- Backman, Milton V., Jr. (1960) BS, MA, U. of Utah, 1954, 1955; PhD, U. of Pennsylvania, 1959.
- Barrett, Ivan J. (1953) BS, Utah State U., 1938; MS, Brigham Young U., 1947.
- Barron, Howard H. (1953) BS, MS, Utah State U., 1943, 1950; EdD, U. of Utah, 1953.
- Berrett, Lamar C. (1963) BS, U. of Utah, 1952; MS, EdD, Brigham Young U., 1960, 1963.
- Berrett, William E. (1948) SJD, U. of Utah, 1966; HDL, Brigham Young U., 1965.
- Burton, Alma P. (1959) BS, Utah State U., 1948; MS, Brigham Young U., 1950; EdD, U. of Utah, 1957.
- Fugal, John P. (1966) BS, MS, DRE, Brigham Young U., 1948, 1959, 1967.
- Garrard, Lamar E. (1967) BS, U. of Idaho, 1949; MS, BS, PhD, Brigham Young U., 1955, 1965, 1968.
- Horsley, A. Burt (1956) BA, MA, Brigham Young U., 1945, 1954; PhD, West Welhelms U., Germany, 1956.
- Palmer, Spencer J. (1968) BA, Brigham Young U., 1952; MA, PhD, U. of California, Berkeley, 1959, 1964.
- Petersen, Melvin J. (1964) BS, MS, EdD, Brigham Young U., 1948, 1955, 1964.
- Stevenson, J. Grant (1953) AS, Weber Coll., 1952; BA, MA, Brigham Young U., 1953, 1955.

Church History and Doctrine

Undergraduate Courses

Asterisk (*) denotes core courses.

100. Introduction to Mormonism. (2:2:0) F, W Only for students who are not LDS.

Culture, practices, and doctrines of The Church of Jesus Christ of Latter-day Saints; religion at BYU.

130. Sharing the Gospel. (2:2:0) F, W, Sp, Su Independent Study also. This class may not be *taken or retaken* by returned missionaries.

Recommended for all prospective missionaries. Focuses upon the purpose, skills, and doctrines of missionary work and prepares prospective missionaries for a more meaningful MTC and mission experience.

231. Doctrines of the Gospel. (2:2:0) F, W, Sp, Su Independent Study also.

Doctrines of The Church of Jesus Christ of Latter-day Saints as taught in the scriptures and by latter-day prophets.

261. Introduction to LDS Family History (Genealogy). (2:2:0) F, W, Sp, Su Independent Study also.

Introduction to family history program of Church; emphasizes identifying ancestors in the first few generations for whom temple ordinances have not been completed; use of Church resources to simplify temple and family history activities.

262. LDS Family History Lab. (1:0:1) Prerequisite: RelC. 261.

Using documents created by the LDS Church to identify ancestors and submit their names for temple ordinances.

263. North American Family History Lab. (1:0:1) Independent Study also. Prerequisite: RelC. 261.

Using records from Canada and the United States to identify ancestors and submit their names for temple ordinances.

264. British Family History Lab. (1:0:1) Prerequisite: RelC. 261.

Using documents from the British Isles to identify ancestors and submit their names for temple ordinances.

265. Scandinavian Family History Lab. (1:0:1) Prerequisite: RelC. 261.

Using documents from the countries of Scandinavia to identify ancestors and submit their names for temple ordinances.

266. Germanic/Slavic Family History Lab. (1:0:1) Prerequisite: RelC. 261.

Using documents from the countries of central and eastern Europe to identify ancestors and submit their names for temple ordinances.

***324, 325. The Doctrine and Covenants.** (2:2:0 ea.) F, W, Sp, Su Independent Study also.

Origin, content, and teachings of the Doctrine and Covenants. RelC. 324 discusses Sections 1 through 70. RelC. 325 considers Sections 71 through 138.

333. Teachings of the Living Prophets. (2:2:0) F, W, Sp, Su Independent Study also.

Calling and function of the living prophets; an emphasis on their teachings through recent conference reports.

341. Latter-day Saint History from 1805 to 1844. (2:2:0) F, W, Sp, Su Independent Study also.

Church history and doctrine from the birth of Joseph Smith to his martyrdom.

342. Latter-day Saint History from 1844 to the Present. (2:2:0) F, W, Sp, Su Independent Study also.

Church history and doctrine from the martyrdom of Joseph Smith to the present.

344. The International Church. (2:2:0) F, W Independent Study also.

History of the Church from 1830 to the present in Britain, Europe, the Pacific, Asia, Latin America, Africa, the Near East, and other areas.

350. The LDS Church in a World Setting. (2:2:0) F, W Study Abroad only.

Christian foundations, restoration, and historical development of the Church in selected regions of the world. Focuses on specific countries as part of Study Abroad Program.

351. The Gospel and the World's Religions. (2:2:0) F, W, Sp, Su

Survey of non-Christian religions and comparisons with LDS doctrine and practice.

352. The Gospel and Christian History. (2:2:0) F, W, Sp, Su

Historical Christianity from its inception to the present.

353. American Christianity and the Rise of the LDS Church. (2:2:0) F, W, Sp, Su

Historical roots and beliefs of the major Christian faiths of America, with special emphasis on the Restoration.

355. Judaism and the Gospel. (1:2:0)

History, doctrine, and practices of Judaism in light of the restored gospel.

356. Islam and the Gospel. (1:2:0)

History, doctrine, and practices of Islam in light of the restored gospel.

370. Introduction to Teaching Seminary. (2:2:0) F, W, Sp, Su

Philosophy, objectives, subject-matter areas, and related problems associated with religious education at the secondary level.

393R. Special Studies in Religion: Church History and Doctrine. (1:1:0 ea.) F, W, Sp, Su Independent Study also.

Topical studies in religion based on student interest and teacher expertise.

471. Methods of Teaching Seminary. (2:2:0) F, W, Sp, Su Prerequisite: consent of instructor. Prospective seminary teachers only.

472. Teaching the Developmentally Disabled. (2:2:0) Prerequisite: RelC. 370 and consent of instructor.

Training prospective Church Educational System teachers to effectively teach religious education to youth who are developmentally disabled.

473. Seminary Student Teaching. (2:0:0) F, W Prerequisite: RelC. 471.

Evaluation of prospective seminary teachers.

475. Seminary Teaching Seminar. (1-2:2:0) Sp

Topics pertinent to success of newly appointed seminary teachers preparatory to fall teaching.

491, 492. Senior Seminar: The Gospel in Academic Disciplines. (1:1:0 ea.) F, W

RelC. 491 and 492 may be taken concurrently or sequentially depending on college policy. See individual college for registration instructions. Generally taught by faculty from disciplines outside Religious Education.

Advanced Undergraduate or Graduate Courses

510R. Special Topics in Church History and Doctrine. (1-3:3:0 ea.) For Seminaries and Institutes of Religion personnel only. No more than 3 hours may apply toward a graduate degree.

Subjects and questions typically addressed by Church Educational System instructors.

524, 525. Analysis of the Doctrine and Covenants. (3:3:0 ea.)

530. LDS Doctrine. (2:2:0)

540R. Special Topics in Church History and Doctrine. (1-3:3:0 ea.) Independent Study available to commissioned and prospective chaplains only.

Topics include Joseph Smith's thought, Church doctrine, schismatic movements in Church history, historical setting of the Restoration, comparative American religions, Near Eastern religions, etc.

541. Documents of LDS Church History (1805-1844). (3:3:0)

542. Documents of LDS Church History (1844-1900). (3:3:0)

543. Documents of LDS Church History (Twentieth Century). (3:3:0)

551. History of the Early Church Through the Fourth Century. (3:3:0)

552. Medieval and Reformation Christianity. (3:3:0)

553. History of the Christian Church Since the Seventeenth Century. (3:3:0)

555, 556. Comparative World Religions. (2:2:0 ea.)

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

640R. Graduate Seminar in Church History and Doctrine. (1-3:3:0 ea.)

650R. Directed Readings in Church History and Doctrine. (1-3:0:0 ea.)

Russian

See Germanic and Slavic Languages.

Scandinavian Languages

See Germanic and Slavic Languages.

School of Social Work

Director: Barbara R. Wheeler (223 KMB)
Associate Director and Graduate

Coordinator: K. Lynn Pehrson (217 KMB)
Undergraduate Coordinator: Dale F. Pearson (237-239 KMB)

Fieldwork Education Director: W. Eugene Gibbons (216 KMB)

Professors

Blake, Reed H. (1967) BS, MS, Brigham Young U., 1957, 1959; PhD, Utah State U., 1969.

Gibbons, W. Eugene (1969) BS, MSW, DSW, U. of Utah, 1960, 1963, 1974.

Pehrson, Kyle Lynn (1990) BS, Weber State Coll., 1969; MSW, U. of Utah, 1971; DSW, Catholic U. of America, 1980.

Associate Professors

Horton, Anne L. (1984) BS, Ohio State U., 1957; MSW, George Williams Coll., 1977; PhD, U. of Wisconsin, 1983.

Seipel, Michael M. O (1982) BS, MSW, U. of Utah, 1974, 1976; PhD, Cornell U., 1982.

Tanner, Elvin R. (1970) BA, Brigham Young U., 1962; MSW, U. of Utah, 1964; PhD, Brigham Young U., 1969.

Wheeler, Barbara R. (1979) BS, MSW, DSW, U. of Utah, 1970, 1972, 1978.

Assistant Professors

Marett, Kevin M. (1992) BS, Brigham Young U., 1982; MSW, U. of Utah, 1985; PhD, Purdue U., 1989.

Norman, Judith L. (1990) BS, Brigham Young U., 1970; BS, Portland State U., 1972; MSW, DSW, U. of Utah, 1978, 1990.

Pearson, Dale F. (1970) BS, MSW, U. of Utah, 1957, 1959; PhD, Brigham Young U., 1981.

Spaid, Wanda M. (1988) BS, Bethel College, 1969; MSW, U. of Minnesota, 1979; DSW, U. of Utah, 1988.

Instructor

Gerdes, Karen E. (1992) BSW, Florida State U., 1979; MSW, Brigham Young U., 1984.

Special Instructors

Paul Buckingham, Ned Campbell, Rita M. Edmonds, Kenneth W. Matheson, Susan Middleton, Kayleen R. Mitchell, Ramona

Morris, Bertrand Peterson, Jini Roby, Darlene Uzelac, Robert A. Verville, Rodnie J. Ward.

Emeriti

Christiansen, John R. (1957) BS, MS, Utah State U., 1949, 1952; PhD, U. of Wisconsin, Madison, 1955.

De Hoyos, Genevieve (1975) BA, Brigham Young U., 1954; MSW, Michigan State U., 1958; PhD, Indiana U., Bloomington, 1967.

Shumway, E. Gene (1975) BS, Brigham Young U., 1951; MSW, U. of Utah, 1953; DSW, Case Western Reserve U., 1969.

Programs and Degrees

BS Social Work
MSW Social Work

The curriculum of the undergraduate social work program is designed to meet the following objectives:

1. Provide for immediate entry into professional social work practice at the baccalaureate level.
2. Prepare students for graduate professional social work education and postgraduate effort.
3. Prepare students for other graduate professional programs where the principles of social work practice are utilized.
4. Encourage social understanding and personal development in preparation for the responsibilities of family life, church service, community leadership, and basic citizenship.
5. Equip students to move forward objectively and evaluate life realistically, and prepare them to be responsible change agents.
6. Recruit prospective social workers.
7. Strengthen the profession of social work.

Graduate Programs

See the 1993–94 BYU Graduate Studies Catalog.

Program Requirements

BS Social Work (Accredited by the Council on Social Work Education)

- I. Suggested preparatory courses (freshman and sophomore years): Anthr 101, Econ 110, Psych 111, Soc 111.
- II. Required preparatory course: SocW 360 (at least a B grade required for application to the program).
- III. Required concurrent supporting courses: SocW-Soc 211; Engl 315; Psych 220; Psych 342 or Soc 389; Soc 112, Zool 205, and one course on special populations.
- IV. Required major courses: SocW 305, 362, 364, 365, 366, 460R (10 hours), 462, 466, and 6 elective hours from 390R, 391R, 463, 464.

V. A minimum of 480 hours of social service agency experience is necessary for graduation, with 5 credit hours being issued for each 240 hours of field experience along with its weekly integrating seminar (SocW 460R). Students must remain in the practicum a minimum of four uninterrupted months.

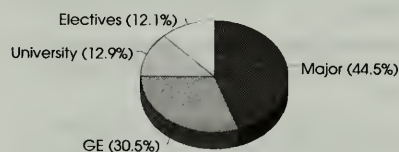
VI. Students are accepted as majors only on formal application and should have a GPA of at least 2.8. Applications must be submitted during the last quarter of SocW 360.

VII. Students will not be allowed to enroll in SocW 362, 364, 460R, 462 unless officially admitted into the program. After formal acceptance as a major, the course sequence is then outlined for the entire program. Without clearance from the fieldwork educational director, students cannot register for the required field experience (460R).

VIII. No D credit will be accepted for major courses.

IX. Total hours needed for graduation: 63–66.

Summary of Degree Requirements for BS Social Work



- | | |
|--|-------|
| 1. Total hours | 128.0 |
| 2. Major hours* | 57.0 |
| 3. General Education requirements | 39.0 |
| Core | 15.0 |
| First-Year Writing | 3.0 |
| Arts and Sciences electives | 12.0 |
| Advanced Math/Foreign Language | 6.0 |
| Advanced Writing | 3.0 |
| 4. University requirements | 16.5 |
| Religion | 14.0 |
| PE/Health | 2.5 |
| 5. Elective hours | 15.5 |
| 6. 40 hours upper-division GPA requirement of 2.0 | |
| 7. Estimated semesters to graduate | |
| 13 hours per semester | 10.0 |
| 16 hours per semester | 8.0 |
| 8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate. | |

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
*Anthr 220	3	
*Soc 111	3	
*Econ 110		3
*Psych 111		3
Second Year		
Psych 220	3	
Soc 112		3
SocW-Soc 211	3	
SocW 360	3	or 3
Zool 205		3
Third Year		
Engl 315		3
Psych 342 or Soc 389	3	
SocW 362, 364	4	4
SocW 365, 305	2	5
Fourth Year		
SocW 366	3	
SocW 460R	5	or 5
SocW 462	5	
Social work elective	3	3
SocW 466		3

*Recommended

School of Social Work (SocW)

Undergraduate Courses

211. Family Interaction. (3:3:0)

The family system through life cycle stages; intrafamily processes; stresses and challenges; individual and family well-being; family interaction with societal systems.

305. Introduction to Social Work Research

Methods. (3–5:Arr.:0) Prerequisite: GE requirement in Mathematics or Foreign Language. If foreign language is completed, 5 credit hours of SocW 305 is required; if Stat 221 is completed, 3 credit hours of SocW 305 is required.

Qualitative and quantitative designs. Problem formulation, data collection, statistical analysis, writing, and presenting results.

360. Introduction to the Field of Social Work. (3:3:0)

Social welfare as a social institution; social work as a profession.

362. Social Service Practice 1. (4:3:2) Majors only. Prerequisite: SocW-Soc 211, Psych 342 or Soc 389 (may be taken concurrently), SocW 360, Zool 205, Psych 220.

Methods of social work practice within a generalist framework: interventions with individuals. Successful completion of lab required.

364. Social Service Practice 2. (4:3:2) Majors only. Prerequisite: SocW 362; Soc 112; Soc 389 or Psych 342 (all may be taken concurrently).

Generalist social work practice; small group process as an agent for change and growth; task groups, therapy groups, and families as targets for change. Successful completion of lab required.

365. Social Welfare Programs and Services. (2:2:0) Prerequisite: SocW 360.

The Social Security Act, federal block grants, federal transfer programs, and the private social welfare sector.

366. Social Welfare Policy. (3:3:0)

Prerequisite: SocW 360, 365.

Social legislation processes; analysis of social policy and the knowledge available to social workers for involvement in social planning and policy change.

367. Social Services for the Aging. (2:2:0)

Independent Study also. Prerequisite: instructor's consent.

Process and impact of social services delivery systems on the aged. Does not count as social work elective.

390R. Special Topics in Social Work. (3:3:0

ea.) Prerequisite: SocW 362 or instructor's consent.

Course content varies from year to year.

391R. Special Topics in Contemporary

Social Work. (3:3:0 ea.) Prerequisite: SocW 362 or instructor's consent.

Course content varies from year to year on basis of current need.

460R. Field Experience in Social Work.

(1–10:2:16 ea.) Majors only. Prerequisite: SocW 360, 362, 364, and concurrent registration in 462.

Practical experience in social service agencies; relationship between theoretical concepts and practice. Fee.

462. Social Service Practice 3. (5:3:2) Majors

only. Prerequisite: SocW 362, 364, and concurrent registration in 460R.

Generalist social work practice; macrolevel practice at organizational and community levels.

463. Child Welfare Services. (3:3:0)

Prerequisite: SocW 362 or instructor's consent.

Theory and practice of child protection, adoption, foster care, etc.

464. Intervention with Minority Clients.

(3:3:0) Prerequisite: SocW 360, 362, or instructor's consent.

Specific factors affecting social work intervention with clients of minority status, i.e., ethnicity, culture, race, life-style, etc.

466. Systems Theory and Development

Process. (3:3:0) Prerequisite: SocW 462 or concurrent registration.

Use of systems theory to integrate human behavior and social environment theory into the generalist social work perspective.

Advanced Undergraduate or Graduate Courses

567. Social Services for the Aging. (2:2:0)

Prerequisite: instructor's consent.

Process and impact of social service delivery systems on the aged. Does not count as social work elective.

595R. Directed Readings. (1–3:0:0 ea.)

Prerequisite: instructor's consent.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

600R. Qualitative/Quantitative Research Methodologies. (2:2:0 ea.)

610. Applications of Social Statistics to Social Work Research Practice. (2:2:0)

612. Human Behavior and Social Environment 3: Psychopathology. (3:3:2)

620. Human Behavior and Social Environment 1: Child, Youth, and Young Adult Development. (3:3:0)

621. Human Behavior and Social Environment 2: Adult Development and Aging. (2:2:0)

630. Social Welfare Policy 1: A Framework for Analysis, Goal Setting, and Change. (3:3:0)

631. Social Welfare Policy 2: Social Work and Family Law. (3:3:0)

638. Practice in Child Services. (2:2:0)

641. Interventive Methods with Children and Adolescents. (2:2:2)

642. Marriage and Family Theories and Treatment. (2:2:0)

643. Advanced Marriage and Family Practice. (2:2:0)

644. Clinical Intervention with Special Populations. (2:2:0)

645. Theological Perspectives on Social Work Practice. (2:2:0)

646. Women's Issues in Social Work Practice. (2:2:0)

647R. Special Topics in Advanced Clinical Practice. (2:2:0 ea.)

648. Selected Fields of Practice. (2:2:0)

649. Evaluative Instruments in Social Work Practice. (2:2:0)

654R. Field Practicum. (1–3:1:24 ea.)

655R. Field Practicum. (1–3:1:24 ea.)

660. Social Work Practice: Casework. (2:2:0)

661. Social Work Practice: Advanced Casework. (3:3:0)

662. Social Work Practice: Group Work. (2:2:0)

663. Social Work Practice: Advanced Group Work. (2:1:1)

664. Social Work Practice: Community Organization. (2:2:0)

665. Social Work Practice: Introduction to Human Services Administration. (2:2:0)

666. Social Work Practice: Advanced Clinical Methods in Assessment and Intervention. (2:2:0)

693R. Seminar in Professional Philosophy, Values, and Ethics of Social Work Practice. (2:2:0 ea.)

698R. Master's Research Project. (1–3:3:0 ea.)

Secondary Education

See Education.

Serbo-Croatian

See Germanic and Slavic Languages.

Sociology

J. Lynn England, Chair (894 SWKT)

Professors

Albrecht, Stan L., Academic Vice President (1974) BS, Brigham Young U., 1966; MA, PhD, Washington State U., 1968, 1970.

Bahr, Howard M. (1973) BA, Brigham Young U., 1962; MS, PhD, U. of Texas, Austin, 1964, 1965.

Bahr, Stephen J. (1973) BS, MS, Brigham Young U., 1968, 1969; PhD, Washington State U., 1972.

Chadwick, Bruce A. (1972) BA, MA, PhD, Washington U., 1964, 1965, 1967.

Duke, James T. (1963) BA, MA, U. of Utah, 1957, 1958; PhD, U. of California, Los Angeles, 1963.

England, J. Lynn (1970) BA, MA, U. of Utah, 1965, 1967; PhD, U. of Pittsburgh, 1971.

Heaton, Tim B. (1980) BS, MS, Brigham Young U., 1974, 1975; PhD, U. of Wisconsin, Madison, 1979.

Jacobson, Cardell K. (1981) BS, Brigham Young U., 1966; MA, PhD, U. of North Carolina, Chapel Hill, 1969, 1971.

Kunz, Phillip R. (1968) BS, MS, Brigham Young U., 1961, 1962; PhD, U. of Michigan, 1967.

Seggar, John F. (1967) BS, Brigham Young U., 1962; MA, PhD, U. of Kentucky, 1964, 1968.

- Thomas, Darwin L. (1972) BA, MA, Brigham Young U., 1962, 1964; PhD, U. of Minnesota, St. Paul, 1968.
- Warner, W. Keith (1971) BS, MS, Utah State U., 1958, 1959; PhD, Cornell U., 1960.

Associate Professors

- Cornwall, Marie (1986) BA, U. of Utah, 1971; MS, Brigham Young U., 1977; PhD, U. of Minnesota, 1985.
- Johnson, Barry L. (1965) BS, MS, Brigham Young U., 1963, 1965; PhD, U. of North Carolina, 1977.
- Johnson, Richard E. (1976) BS, Brigham Young U., 1971; MA, PhD, U. of Washington, 1972, 1976.
- Spencer, Berkley A. (1969) BA, MA, Brigham Young U., 1960, 1962; PhD, Cornell U., 1967.

Assistant Professors

- Barber, Brian K. (1990) BA, U. of California, Santa Cruz, 1977; MA, Azusa Pacific U., 1983; PhD, Brigham Young U., 1987.
- Duke, James B. (1990) BS, Brigham Young U., 1983; AM, PhD, Harvard U., 1986, 1991.
- Ward, Carol (1990) BA, MA, North Texas State U., 1973, 1976; PhD, U. of Chicago, 1992.
- Young, Lawrence A. (1986) BS, MS, Brigham Young U., 1978, 1980; PhD, U. of Wisconsin, Madison, 1989.

Emeriti

- Ballif, Ariel (1932) BS, Brigham Young U., 1925; MA, PhD, U. of Southern California, 1937, 1945.
- Bradford, Reed H. (1946) BA, Brigham Young U., 1937; MA, Louisiana State U., Alexandria, 1939; MA, PhD, Harvard U., 1941, 1946.
- Larsen, Vernon W. (1952) BA, MA, Brigham Young U., 1949, 1950; PhD, Cornell U., 1957.
- Peterson, Evan T. (1953) BS, MS, Brigham Young U., 1953, 1953; PhD, U. of Michigan, 1959.
- Rollins, Boyd C. (1963) BS, Utah State U., 1953; MS, Brigham Young U., 1958; PhD, Cornell U., 1961.
- Smith, Wilford E. (1947) BA, U. of Utah, 1943; MA, Brigham Young U., 1948; PhD, U. of Washington, 1952.
- Symons, Joseph N. (1953) BS, MS, Utah State U., 1927, 1932; PhD, U. of Chicago, 1944.

Programs and Degrees

BS Sociology

Emphases:

- Data Analysis
- Deviance
- Organizations and Institutions
- Social Issues
- Social Psychology
- Sociology Teaching

MS Sociology

PhD Family Studies

PhD Sociology

Sociologists study people, their organizations, and their cultures. The organizations include families, tribes,

communities, and societies, along with a variety of social, religious, political, and business institutions. The study of culture examines language, beliefs, and knowledge in societies.

Areas of study in sociology include social organization and social psychology. Sociologists may specialize in the study of urban or rural settings. They may be involved in the scientific study of deviance, family, minority groups, communities, or any of a variety of other subject areas. Some sociologists conduct surveys or social experiments. Growing numbers apply sociological knowledge in corrections and penology, education, public relations in industry, and regional and community planning.

One of the primary subject areas in the social sciences, sociology is a broad liberal arts major, rather than a narrow occupational specialty. Students who major in sociology are not trained for a single occupation, but instead they are qualified for a wide range of jobs and graduate programs.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All BS Degree Programs in Sociology

- I. Soc 111, 205, 300, 311, 350, 420, 422.
- II. No D credit will be accepted for major courses, and nothing below C is acceptable in core classes.
- III. At least 10 hours of residency in sociology.
- IV. Courses in all the sociology emphases should be taken in the following sequence:
 - A. Soc 111.
 - B. Soc 300, 311, 315.
 - C. All other 300-level courses and 211.
 - D. Soc 400, 411, 420, 422, 430, 460.

BS Sociology

I. *General Sociology Emphasis:* Broad liberal arts background for such areas as business, work within various social agencies, or preparation for marriage and parenthood. This major is helpful for those preparing to do further study in law, medicine, dentistry, business administration, organizational behavior, or public administration.

Recommended in addition to above core courses: Soc 315, 370, 411.

II. *Data Analysis Emphasis:* We are in a high-tech era. Information gathering, data analysis, and distribution of information are prerequisites for any informed person, group, or corporate entity. This emphasis gives specific hands-on experience with professional researchers in each of these phases of information utilization.

In addition to above core courses, complete Soc 303R, 315, 345, 400, 430, 503.

III. *Deviance Emphasis:* This emphasis focuses on how groups make formal and informal rules, why rule violations occur, and reactions to rule violations. Deviance by groups and individuals is examined as well as formal and informal deviance.

In addition to above core courses, complete Soc 112, 380, 381, 383, 389.

IV. *Organizations and Institutions Emphasis:* This emphasis focuses primarily on the nature of organizations and institutions in society. It is concerned with the structure, functioning, effectiveness, and problems of these organizations and institutions.

In addition to above core courses, complete 15 hours from Soc 211, 323, 324, 325, 326, 328, 329, 370.

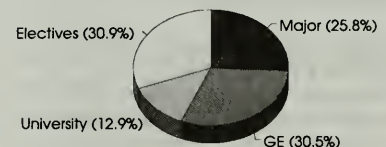
V. *Social Issues Emphasis:* The decade of the nineties poses many significant issues that need both understanding and action. Environment, abortion, crime and delinquency, mental health, drug abuse, and family instability are but a few that need significant attention.

In addition to above core courses, complete 15 hours from Soc 112, 323, 325, 326, 328, 329, 345, 367, 370, 389.

VI. *Social Psychology Emphasis:* The reciprocal influence of the individual on the group and vice versa are critical in understanding ourselves and our society. Understanding personal and group effectiveness are keys to productivity and social satisfaction. Social exchange, leadership, and interpersonal styles are emphasized.

In addition to above core courses, complete 15 hours from Soc 211, 323, 351, 357, 358, 367, 370, Psych 555.

Summary of Degree Requirements for BS Sociology



1. Total hours	128.0
2. Major hours*	33.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	39.5
6. 40 hours upper-division GPA requirement of 2.0	

7. Estimated semesters to graduate
13 hours per semester 10.0
16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

VII. *Sociology Teaching Emphasis:* For those who wish to teach in the secondary schools. See Sociology in the Secondary Education section of this catalog for major and minor requirements.

Minors

Students may obtain a general minor in sociology by taking a total of 15 hours, 9 of which must be from Soc 111, 350, 420, 422.

The Department of Sociology also offers three specific minors, one focusing on social organization and group processes, one on contemporary social issues, and one on women's studies.

I. Social organizations and group processes minor requirements: Soc 420 and 12 hours from Soc 111, 315, 323, 324, 350, 357, 358, 422, Psych 555.

II. Contemporary social issues minor requirements: Soc 112 and 12 hours from Soc 111, 211, 323, 325, 326, 328, 329, 335, 345, 365, 370, 380, 381, 383, 389, 422, 460, 560.

III. Women's studies minor requirements (18 hours): Soc 222, 367; one of Soc 460, Anthr 431, FamSc 371, 461; 9 elective hours from Psych 308, Hist 384, Engl 396, Soc 323, Hist 398, FamSc 395R, Germ 440R

Sociology (Soc)

Undergraduate Courses

111. Introductory Sociology. (3:3:0) Honors and Independent Study also.

Social group influence; social interaction, processes, organization, and change; family, religion, government, population, culture, race relations.

112. Current Social Problems. (3:3:0) Honors and Independent Study also.

Individual deviance (violence, insanity, drugs, sex, crime, etc.) and social disorganization (poverty, race and sex discrimination, divorce, overpopulation, etc.). Conditions, causes, solutions.

205. Applied Social Statistics. (3:3:0) Independent Study also.

Introductory descriptive and inferential statistics; graphing, central tendency, variation, hypothesis testing and parameter estimation, measures of association, correlation, and regression.

211. Family Interaction. (3:3:0)

The family system through life cycle stages; intrafamily processes; stresses and challenges; individual and family well-being; family interaction with societal systems.

222. Introduction to Women's Studies. (3:3:0)

Survey of scholarship about women's lives; new historical, sociological, psychological, and literary approaches that inform our understanding of women's experience.

300. Methods of Research in Sociology.

(3:3:0) Independent Study also. Prerequisite: Soc 111 or equivalent or instructor's consent.

Tools of social research; survey, experimentation, content analysis, secondary analysis, qualitative research, evaluation research, data processing and analysis, and report writing.

303R. Introduction to Social Science and Statistical Packages. (2:2:2 ea.)

Analytical work with social science variables using computer packages such as SAS or SPSSX (see section in Class Schedule for designated statistical package). Lab.

311. Contemporary Sociological Theory. (3:3:0) Prerequisite: Soc 111.

Introduction and evaluation of current theories of social behavior (why people do what they do).

315. Applied Sociology. (3:3:0) Prerequisite: Soc 111, 112.

Solutions to human problems in industry, the community, and personal life.

323. Racial and Minority-Group Relations. (3:3:0) Prerequisite: Soc 111.

Social psychological and social structural analysis of racial and ethnic relations; prejudice, discrimination, responses, protests, current issues.

324. Political Sociology. (3:3:0) Prerequisite: Soc 111.

Power and decision making in social groups. Theory and research; government and political behaviors; bargaining behavior; terrorism.

325. Introduction to the Sociology of Religion. (3:3:0) Prerequisite: Soc 111.

Origin, growth, and organizational development of religious groups; church activity, conversion, secularization, religious change.

326. Sociology of Education. (3:3:0)

Social origins of goals and curricula; theories of change and control; the nature of achievement in education.

327. Sociology of the LDS Church and Its People. (3:3:0)

The LDS Church from a social science perspective, including the Church as a new religious movement, LDS culture, the institutionalization process.

328. Sociology of Sport. (3:3:0)

Analysis of the sociological aspects of sport and their relationship to politics, economics, stratification, education, and family. Focus on concepts, theory, and related research.

329. Medical Sociology. (3:3:0) Prerequisite: Soc 111 or Psych 111.

Social epidemiology, the sick role, sociocultural definitions of and responses to illness, and the organization of medical-health delivery systems.

330. Theory of Social Change and Modernization. (3:3:0) Prerequisite: Soc 111.

Social change in contemporary society from diverse theoretical points of view.

335. Social Change and Modernization in Latin America. (3:3:0)

Contemporary changes in the social institutions and cultures as related to the modernization process.

345. World Populations. (3:3:0) Prerequisite: Soc 111.

Fertility, mortality, and migration patterns of world populations as they relate to current social, economic, political, and religious issues.

350. (Soc-Psych) Introduction to Social Psychology. (3:3:0) Independent Study also.

Conformity and obedience; socialization, norms, roles; attitudes, leadership, group processes.

351. Fundamentals of Self-image and Self-esteem. (3:3:0) Prerequisite: Soc 111.

Social bases and measurement of self-concept. Building positive self-definitions; applications in family, school, and work settings; low self-esteem and deviance.

357. Interpersonal Growth and Group Processes. (3:2:2) Independent Study also. Prerequisite: Soc 111.

Effective interpersonal relationships and group functioning.

358. Effective Social Relations. (3:2:2) Prerequisite: Soc 111.

Development and practice of skills in social relations, including giving and receiving feedback, conflict resolution, negotiation and bargaining, and leadership choices.

365. Sociology of Aging. (2:2:0) Independent Study also.

Demographic and social factors related to aging; agencies, serving older citizens, and role of community in solving problems of aged. Required for students in gerontology minor and/or certificate programs.

367. Sociology of Gender. (3:3:0) Prerequisite: Soc 111.

Gender in social institutions: family, social hierarchies, economics, education, organizations, religion, and science.

370. The Sociology of Urban Life. (3:3:0)
Prerequisite: Soc 111.

Norms, social controls, and social processes in urban areas in both historical and contemporary perspectives.

380. Deviant Behavior and Social Control. (3:3:0) Prerequisite: Soc 111.

Theory and research related to deviance. Specific topics include psychosis, addiction, homosexuality, violence, rape, others.

381. Crime, Justice, and Corrections. (3:3:0)
Prerequisite: Soc 111.

Nature and extent of criminal behavior; current theory and research related to causes of crime and treatment of criminals.

383. Juvenile Delinquency. (3:3:0)
Prerequisite: Soc 111.

Lawlessness of children and adolescents: causation, treatment, prevention, and outlook.

389. Social Aspects of Mental Health. (3:3:0)
Independent Study also. Prerequisite: Soc 111.

Personality disorders and emotional maladjustments that originate in group life; social causation, treatment, and prevention of mental illness.

390R. Special Topics in Contemporary Sociology. (1–3:3:0 ea.) Prerequisite: instructor's consent.

Course content varies from year to year.

398R. People and Cultures Around the World. (1–3:Arr.:Arr. ea.)

Sociological aspects of societies included in BYU Travel Study tours.

400. Social Science Computing and Data Analysis. (3:3:0) Prerequisite: Soc 205, 300, 303, or instructor's consent.

Social science data management and analysis using SPSSX. Introduction to operating systems, data entry, file creation and management, and data manipulation.

411. Development of Sociological Theory. (3:3:0) Prerequisite: Soc 111, 205, 300, 311.

Contributions of outstanding theorists, such as Durkheim, Weber, Spencer, Marx, Simmel, Cooley and Mead to the development of sociology.

420. Social Organization. (3:3:0)
Prerequisite: Soc 111, 205, 300, 311.

Social organization perspectives; nature and problems; bureaucracy, management, structure, change; relations between individuals and organizations; general societal context.

422. Social Stratification. (3:3:0) Prerequisite: Soc 111, 205, 300, 311.

Distributions of money, prestige, and power as they relate to life chances, life-style, other social institutions, and social justice.

430. Planned Change. (3:3:0) Prerequisite: Soc 111, 205, 300, 311.

Principles, prescriptive models, and strategies of planned change in various social contexts.

460. Marriage and Family Interaction. (3:3:0)
Prerequisite: Soc 111.

Advanced appraisal of courtship, marriage relationships, and family interaction. Primarily for majors in sociology, family sciences, and related fields.

Advanced Undergraduate or Graduate Courses

503. Advanced Social Science Computing. (3:3:1) Prerequisite: Soc 303, 400, or instructor's consent.

Appropriate use of computer technology and software in social science scholarship and research: data acquisition and management, advanced statistical methods, computer information retrieval and exchange.

504. Mathematical Sociology. (3:3:0)
Prerequisite: Math 105.

Mathematical techniques of simulating and modeling social processes.

515. Seminar in Applied Sociology. (3:3:0)
Prerequisite: Soc 315, 600, 606, 610.

Uses of sociological theory and methods to deal with individual, organizational, and societal problems. Techniques for communicating such knowledge to the nonsociologist.

524. Advanced Political Sociology. (3:3:0)

Social basis of political behavior. Modern theories and research concerning use of power and decision making.

525. Sociology of Religion. (3:3:0)
Prerequisite: Soc 111, 325, or instructor's consent.

Influences of social factors in the development of various religious systems.

527. Sociology of the LDS Church and Its People. (3:3:0)

The LDS Church from a social science perspective, including the Church as a new religious movement; LDS culture; the institutionalization process.

530. Sociology of International Development. (3:3:0)

Major theoretical paradigms of development with strategies and practical application in the international setting.

545. Population Analysis. (3:3:0)
Prerequisite: Soc 205 or equivalent.

Availability, use, and interpretation of population data for local, state, and national areas applied to planning and evaluation.

560. (Soc-FamSc) Contemporary Theories About the Family. (3:3:0)

Contemporary theories and research about the family, emphasizing role, exchange, and systems theories.

561. The Family Institution. (3:3:0)

The family in different societies; problems created by various family systems.

565. Sociology of Aging. (2:2:0)

Demographic and societal factors affecting aging. Agencies serving older citizens and role of community in resolving problems of aged.

590R. Special Topics in Sociology. (1–3:3:0 ea.) Prerequisite: instructor's consent.

Course content varies from year to year.

595R. Directed Readings. (1–3:0:6 ea.)

Individualized reading program supervised by faculty member. Pass/Fail only.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

600. (Soc-FamSc) Advanced Research Methods. (3:3:0)

601. (Soc-FamSc) Seminar in Survey Research. (3:3:0)

602. (Soc-FamSc) Experimental Design. (3:3:0)

603R. (Soc-FamSc) Research Practicum. (3:1:8 ea.)

604. Ethnographic Research Techniques. (3:0:0)

606. Intermediate Statistics. (3:3:0)

608. Sociological Measurement. (3:3:0)

611. Seminar in Contemporary Sociological Theory. (3:3:0)

612. Seminar in the Development of Sociological Theory. (3:3:0)

620. Theory and Research in Social Organization. (3:3:0)

621. Complex Organizations. (3:3:0)

622. Social Stratification. (3:3:0)

623. Seminar in Race and Ethnic Relations. (3:3:0)

625R. Seminar in the Sociology of Religion. (3:3:0 ea.)

630. (Soc-Psych 655) Attitude Measurement and Change. (3:3:0)

650. Advanced Social Psychology. (3:3:0)

660. (Soc-FamSc) Parent-Child Interaction. (3:1:2)

670. Contemporary Urban Social Structure. (3:3:0)

678. Social Policy and Feminist Legal Thought. (3:3:0)

681R. Seminar in Deviance, Crime, and Corrections. (3:3:0 ea.)

692R. (Soc-FamSc) Seminar in Family Relationships. (1–3:3:0 ea.)

697R. Directed Research. (1–3:0:6 ea.)

698R. Master's Project. (1–6:0:0 ea.)

699R. Master's Thesis. (1–6:Arr.:Arr. ea.)

706. Advanced Statistical Methods. (3:3:0)

711. Sociological Theory and Theory Building. (3:3:0)

720R. Seminar: Social Organization. (1-3:3:0 ea.)

750. Seminar: Social Psychology. (3:3:0)

792R. (Soc-FamSc) Family Symposium. (0.5:1:0 ea.)

799R. Doctoral Dissertation. (1-9:Arr.:Arr. ea.)

South American Indian Languages

See Linguistics.

Spanish and Portuguese

Merlin H. Forster, Chair (4048 JKH8)

Professors

Cluff, Russell M. (1983) BA, MA, Brigham Young U., 1972, 1974; PhD, U. of Illinois, 1978.

Dennis, Ronald D. (1966) BA, Brigham Young U., 1964; MA, PhD, U. of Wisconsin, Madison, 1965, 1972.

Forster, Merlin H. (1987), H. Darrel Taylor Distinguished Professor of Latin American Literature; BA, Brigham Young U., 1956; MA, PhD, U. of Illinois, 1957, 1960.

Larson, Jerry W. (1980) BA, Utah State U., 1969; MA, Brigham Young U., 1974; PhD, U. of Minnesota, Minneapolis, 1977.

Lyon, Thomas E. (Ted) (1972) BA, U. of Utah, 1963; PhD, U. of California, Los Angeles, 1967.

Moon, H. Kay (1963) BA, MA, Brigham Young U., 1957, 1959; PhD, Syracuse U., 1963.

Quackenbush, L. Howard (1970) BA, MA, Brigham Young U., 1965, 1967; PhD, U. of Illinois, 1970.

Rosen, Harold E. (1963) BA, MA, Brigham Young U., 1954, 1959; PhD, U. of Oregon, 1966.

Taylor, James Scott (1962) BA, MA, Brigham Young U., 1957, 1960; PhD, Ohio State U., 1967.

Associate Professors

Ashworth, Peter P. (1966) AA, Bakersfield Coll., 1952; BA, Brigham Young U., 1962; PhD, U. of Oklahoma, 1967.

Brown, Jack V. (1964) BA, MA, Brigham Young U., 1957, 1960.

Clegg, J. Halvor (1972) BA, Brigham Young U., 1964; MA, PhD, U. of Texas, Austin, 1967, 1969.

Fails, Willis Clark (1981) BA, MA, Brigham Young U., 1975, 1977; PhD, U. of Texas, Austin, 1984.

Jackson, T. Wendell (1968) BA, Brigham Young U., 1956; PhD, Ohio State U., 1968.

Jensen, Gordon K. (1969) BA, Brigham Young U., 1963; MA, PhD, U. of Wisconsin, Madison, 1966, 1975.

Lund, Christopher C. (1992) BA, Brigham Young U., 1967; MA, PhD, U. of Texas at Austin, 1967, 1970.

Meredith, Robert Alan (1976) BA, MA, Brigham Young U., 1969, 1974; PhD, Ohio State U., 1976.

Ramsey, Myriam (1975) Dipl. Pontificia Universidade Católica do Brasil, Campinas, Brazil, 1954; BA, MAT, Georgia State U., 1971, 1973; PhD, U. of North Carolina, Chapel Hill, 1975.

Rosenberg, John R. (1985) BA, MA, Brigham Young U., 1979, 1981; MA, PhD, Cornell U., 1984, 1985.

Assistant Professors

Labrum, Marian B. (1974) BA, MA, Brigham Young U., 1972, 1975, PhD, Middlebury Coll., 1988.

Mathews, Thomas J. (1991) BA, Weber State Coll., 1981; MA, Middlebury Coll., 1984; PhD, U. of Delaware, 1992.

Meléndez, Gloria S. (1978) BA, U. of Utah, 1955; PhD, Brigham Young U., 1980.

Rojas, Hilda (1991) BA, MA, Universidad de Chile, 1951, 1963; PhD, Universidad Complutense de Madrid, Spain, 1990.

Turley, Jeffrey (1989) BA, MA, Brigham Young U., 1982, 1984; PhD, U. of California, Berkeley, 1992.

Assistant Lecturer

Hoskisson, Joaquina Valtierra (1990) BA, MA, Brigham Young U., 1971, 1974.

Emeriti

Anderson, C. Dixon (1956) BA, Brigham Young U., 1953; MA, PhD, U. of Texas, Austin, 1956, 1965.

Compton, Merlin D. (1964) BA, MA, Brigham Young U., 1952, 1954; PhD, U. of California, Los Angeles, 1959.

Dowdle, Harold L. (1968) BA, MA, Brigham Young U., 1948, 1949; PhD, Stanford U., 1954.

Gibson, M. Carl (1949) BA, MA, Brigham Young U., 1947, 1949; PhD, U. of Oregon, 1960.

Hall, Wendell H. (1966) BA, MA, U. of Utah, 1952, 1953; PhD, Inter-American U., Mexico, 1974.

Rojas, Gonzalo (1985) Licenciatura, Universidad de Chile, 1942, Poet in Residence, 1991.

Shreeve, Lyman Sidney (1965) BA, MA, Brigham Young U., 1949, 1951; PhD, Inter-American U., Mexico, 1970.

Valentine, Amy Y. (1970) BA, Brigham Young U., 1946.

Programs and Degrees

BA Portuguese

BA Honors in Portuguese and University Honors

BA Spanish

BA Honors in Spanish and University Honors

BA Spanish Teaching

BA Spanish Translation

MA Portuguese

Emphases:

Portuguese Language

Portuguese Literature

MA Spanish

Emphases:

Spanish Language

Spanish Literature

Spanish Teaching

MA Language Acquisition (Spanish and Portuguese)

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

No D grade is acceptable in major or minor courses.

Placement in Spanish Classes

Students who have never studied Spanish should enroll in beginning classes, Spanish 101-102 (a two-semester sequence to complete first year).

Students who have had prior study of Spanish, have had significant residence in a Spanish-speaking environment, or have learned another language (especially Italian, Portuguese, or French) should take advantage of their experience and enroll in an accelerated, intermediate, or advanced class. The department encourages students with high school or other experience to take a placement examination at the Humanities Language Resource Center before enrolling in a class. Possible options are:

1. *Accelerated 101-102 Spanish*: For students who have not studied Spanish but who have mastered other languages or who have high language aptitude.
2. *Spanish 201 (Intermediate Review)*: For students who have had from two to four years of previous study and want to review basic fundamentals of grammar while continuing to develop conversational skills and vocabulary.
3. *Spanish 202*: For students with a knowledge of grammar structures but needing additional reading experience. Culmination of series that fulfills GE Foreign Language/Mathematics requirements.
4. *Spanish 211 and 212*: For students who have had a good grammatical foundation but feel their conversational skills are weak. Recommended: concurrent registration in Spanish 201 and 202, respectively.
5. *Spanish 302*: For returned missionaries and students with extensive foreign residence experience. Can serve as

prerequisite to other upper-division courses. Native speakers and students who complete Spanish 202 may not take this course. Fulfills GE Foreign Language/Mathematics requirement. Spanish 302 credit may be applied to a Spanish minor but not to a Spanish major.

6. *Spanish 321, 339, 345, and 355:* For students with four or more good years of prior study. Native speakers normally begin at this level.

Students who have studied Spanish at another college or university should check with the Spanish Department to determine which BYU classes are equivalent.

The department is flexible in allowing class changes during the first two weeks of each semester to permit students who find themselves misplaced to adjust.

Language Credit by Examination

See policy in College of Humanities' Language Credit by Examination section of this catalog.

Foreign Language Student Residence

The Foreign Language Student Residence provides live-in opportunities for students in Spanish and Portuguese. A twenty-four-hour-per-day Spanish or Portuguese rule assures participants intensive use of the language, under the direction of native speakers. See the department secretary at 4048 JKHB for information.

Language Skills Development

A program to improve and monitor all language skills at each level of course work has been developed by the department, and a final oral proficiency examination is required of all graduating seniors. Writing skills in Spanish or Portuguese courses will advance from writing exercises and short messages in 100-level courses to original short themes in 200-level classes. Papers in the language at the 300 level and more extensive research and vocabulary and full control of structures at the 400 level will complete the program.

Minor or Double Major Required for Spanish or Portuguese Majors

All teaching majors are required to work under Option 1. Nonteaching majors will have a choice of Option 1 or Option 2.

Option 1 Minor

Complete a minor. (Minors will be required of all who seek teaching certificates and must be chosen from those areas approved by the Education Advisement Center.) Programs may be selected to fit individual needs, but recommended areas include a second modern foreign language, Latin, Greek, English, Latin-American Studies, European Studies, comparative literature, humanities, social studies, history, business, or one of the fine arts.

Option 2 Minor

Majors in the department are encouraged to select a minor from any department in the university. Some, however, may choose to fulfill Option 2 by completing at least 15 hours from among the following related fields: a second modern foreign language (upper-division courses only), Latin, Greek, English, linguistics, classical civilization, Latin American history or geography, Spanish history or geography, humanities, archaeology, comparative literature, or other areas approved by the department chair. Lower-division General Education courses will not be counted as Option 2 credit.

Double Major

A viable alternative to a minor is to graduate with a double major. See suggestions under Professional Opportunities.

Professional Opportunities

The field of teaching has always provided good employment opportunities for Spanish majors. In addition, opportunities for both Spanish and Portuguese have been found in government service (translation, U.S. State Department, CIA, FBI, Border Patrol, Peace Corps, NSA, USIA), business, social work, airlines, banking, etc. Many majors go on to professional schools (law, medicine, dentistry, etc.), where a liberal arts background is advised. For employment in fields other than teaching, a strong minor or a second major in the employment area is strongly encouraged.

As soon as students declare a Spanish or Portuguese major, they should come to the department office (4048 JKHB) and be assigned a faculty advisor.

Foreign Residency

The department strongly recommends that all majors participate in an extended (at least two continuous months) and intensive language and culture experience in a Spanish- or Portuguese-speaking country or area.

A student should complete this requirement by:

1. Residency abroad (may include a Spanish or Portuguese LDS mission, attendance at a foreign university, an advanced exchange program, or similar intensive foreign residence).
2. BYU Study Abroad Programs in Spain, Mexico, Brazil, or Chile.
3. Individual or group-arranged internship programs abroad as approved by the department.

If a student is unable to participate in one of these programs, he or she must spend at least one year (two semesters) in the Foreign Language Student Residence. Each student must pledge to use only Spanish or Portuguese within the residence. Prerequisite to this experience is Span/Port 201 or its equivalent; any exceptions must be approved by the department. For further

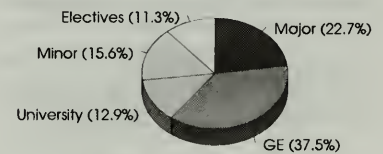
information contact the department secretary or the Foreign Language Student Residence Office (4088 JKHB, 378-2775).

BA Portuguese

- I. Prerequisite: Port 101, 102, 201, 202, 211 (may be waived for those having sufficient proficiency with the language).
- II. Required courses: Port 321, 322, 339; 345 or 355; 441, 451.
- III. Electives: 12 hours from Port 311*, 326, 329, 345, 355, 480R, 490, 520, 521, 522, 529R, 539R, 542, 549R, 552, 553, 559R. Port 490 is highly recommended for those who wish to pursue a graduate degree.
- IV. Minor: Option 1 minor, Option 2 minor, or double major.
- V. Meet at least the minimum requirement explained under Foreign Residency.
- VI. Pass the Senior Proficiency Evaluation with a 3 (Superior) or better, in connection with Port 491.

*Portuguese-speaking missionaries and natives may not count Port 311 as part of the 30 hours.

Summary of Degree Requirements for BA Portuguese



1. Total hours	128.0
2. Major hours*	29.0
3. General Education requirements	48.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	15.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Required minor	20.0
Electives	14.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in Portuguese and University Honors

I. University Honors: 12-hour core and the other Honors graduation requirements.

II. Honors in Portuguese (see department Honors advisor for further details): Designed to expand and enhance interpretive reading, research, language, and writing skills, the Honors major consists of the following steps to produce an original Honors thesis (listed on student's permanent transcript). In addition, Honors candidates must attain a rating of Superior on the ACTFL oral proficiency interviews administered by the department in connection with Port 491.

A. Read five texts from the Portuguese Honors reading list (available from the department). The reading list will vary according to area of specialization (i.e., Portuguese literature students will read from medieval, Golden Age, nineteenth- and twentieth-century Portuguese, colonial Brazilian, and modern Brazilian literature; linguistics students will select from texts and technical works in the field). Students will discuss these five texts in a formal setting with the Portuguese Honors faculty and be responsible for a high level of comprehension of each work.

B. In consultation with thesis advisor, place one of these texts in context by becoming familiar with:

1. A few primary texts (literary, graphic arts, historical, philosophical, musical), providing context from text selected for thesis.
2. Theoretical works informing particular methodology to be used for thesis.
3. Most important secondary works on thesis topic.

C. Write Honors thesis (499R). In some situations (usually in the case of pedagogy and linguistics specialists) students may choose to conduct experiments or field research. Students may earn up to 6 credit hours in 499R to represent work on levels A, B, and C.

The Honors thesis will be an interpretive "reading" or an expanded research project based on one of the texts selected. It should be founded in the context provided by the primary tests (B.1); it should follow the methodology determined from the theoretical works (B.2); and it should be supported by the secondary works (B.3).

BA Spanish

I. Prerequisite: Span 101, 102, 201, 202, 211, 212 (may be waived for those having sufficient proficiency with the language).

II. Required courses: Span 321, 322, 339; 345 or 355; 441, 451.

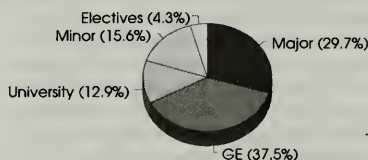
III. Electives: 18 hours from Span 326, 329, 345, 355, 365, 377, 378, 395R, 423, 425, 461, 480R, 490, 520, 521, 522, 539R, 540, 543, 544, 546, 548, 549R, 550, 554, 555, 556, 558, 559R. Span 490 is highly recommended for those who wish to pursue a graduate degree. Students must select at least one literature and one linguistics class as part of their elective credit (see course descriptions).

IV. Minor: Option 1 minor, Option 2 minor, or double major.

V. Meet at least the minimum requirement explained under Foreign Residency.

VI. Pass the Senior Proficiency Evaluation with a 3 (Superior) or better, in connection with Span 491.

Summary of Degree Requirements for BA Spanish



1. Total hours	128.0
2. Major hours ♦	38.0
3. General Education requirements	48.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	15.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Required minor	20.0
Electives	5.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦ Note: Hours do not include any course that could be used to fill GE or university requirements.

BA with Honors in Spanish and University Honors

I. University Honors: 12-hour core and other Honors graduation requirements.

II. Honors in Spanish (see department Honors advisor for further details): Designed to expand and enhance interpretive reading, research, language, and writing skills, the Honors major consists of the following steps to produce an

original Honors thesis (listed on student's permanent transcript). In addition, Honors candidates must attain a rating of Superior on the ACTFL oral proficiency interviews administered by the department in connection with Span 491.

A. Read five texts from the Spanish Honors reading list (available from the department). The reading list will vary according to area of specialization (i.e., Spanish literature students will read from medieval, Golden Age, nineteenth- and twentieth-century Spanish, colonial Spanish-American, and modern Spanish-American literature; linguistics, pedagogy, and translation students will select from texts and technical works in the field). Students will discuss these five texts in a formal setting with the Spanish Honors faculty and be responsible for a high level of comprehension of each work.

B. In consultation with thesis advisor, place one of these texts in context by becoming familiar with:

1. A few primary texts (literary, graphic arts, historical, philosophical, musical), providing context from the text selected for thesis.
2. Theoretical works informing particular methodology to be used for thesis.
3. Most important secondary works on thesis topic.

C. Write Honors thesis (499R). In some situations (usually in the case of pedagogy and linguistics specialists) students may choose to conduct experiments or field research. Students may earn up to 6 credit hours in 499R to represent work on levels A, B, and C.

The Honors thesis will be an interpretive "reading" or an expanded research project based on one of the texts selected. It should be founded in the context provided by the primary tests (B.1); it should follow the methodology determined from the theoretical works (B.2); and should be supported by the secondary works (B.3).

BA Spanish Teaching

Requirements for a Spanish teaching major can be found under Spanish in the Secondary Education section of this catalog.

BA Spanish Translation

The Spanish translation major provides training in the theory and practice of translation and interpretation, both for students planning to translate professionally and for students wishing to add translation or interpretation as an ancillary skill.

I. Prerequisite: Span 321, 322 with grade B or better.

II. Courses: Span 321, 322, 339; 345 or 355; 425, 427*, 428*, 441, 451, 527*, 528*, plus 3 hours of elective credit from those electives listed for BA in Spanish.

III. Concurrent English composition course: Complementary English course in general area of expertise recommended (Engl 311 or 312, humanities and liberal arts; 315, social science and business; or 316, science and engineering).

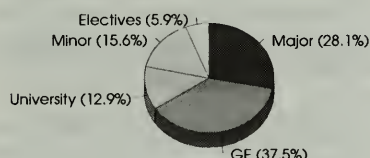
IV. Option 1 minor or double major.

V. Meet at least the minimum requirement explained under Foreign Residency.

VI. Pass the Senior Proficiency Evaluation with a 3 (superior) or better, in connection with Span 491.

*Must be taken in sequence; Span 322 must be taken before 427. Must maintain a B grade or better to continue in sequence.

Summary of Degree Requirements for BA Spanish Translation



1. Total hours	128.0
2. Major hours ♦	36.0
3. General Education requirements	48.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	15.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Required minor	20.0
Electives	7.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Portuguese Minor

Required are 15 hours of credit from courses outlined for the major, including Port 321, 339; 345 or 355; 441 or 451.

Spanish Minor

Required are 18 hours of credit from courses outlined for the major, including Span 321,

339; 345 or 355; 441 or 451. Span 302 credit may be applied to the Spanish minor but is not required.

Spanish Teaching Minor

Required are 21 hours of credit from Span 321, 326, 339; 345 or 355, 377, 378; 441 or 451. In addition, students must pass a Senior Proficiency Evaluation with a 2+ in connection with Span 491. See Spanish in the Secondary Education section of this catalog.

Portuguese (Port)

Undergraduate Courses

101, 102. First-Year Portuguese. (4:5:1 ea.)

Pronunciation, conversation, reading, and fundamentals of grammar. Specific attention to Portuguese as the language of Brazil.

199R. Cooperative Education. (1–3:0:0 ea.)

Prerequisite: consent of both department chair and cooperative education coordinator.

On-the-job experience evaluated by supervisor and posted on student's transcript.

201. Intermediate Portuguese Reading and Conversation. (4:5:0) Prerequisite: Port 102 or three units of high school Portuguese.

Review of grammar. Reading, writing, conversation.

202. Portuguese Reading and Comprehension. (3:3:0) Prerequisite: Port 201.

Fourth-semester class combining grammar and culture. Not for returned missionaries. Culmination of GE Mathematics/Foreign Language requirement.

211R. First-Semester Conversation. (2:2:1 ea.) Prerequisite: Port 102 or equivalent. Recommended: concurrent registration in Port 201.

212. Second-Semester Conversation. (2:2:1) Prerequisite: Port 211 or equivalent.

302. Advanced Portuguese Grammar, Reading, and Culture. (3:3:0) Native speakers should take Port 321.

Introduction of culture, literature, and grammatical concerns through reading short stories, novels, and drama in Portuguese. First class for returned missionaries.

311R. Third-Year Conversation. (2:2:1 ea.) Prerequisite: Port 211 or equivalent.

Tools course to help students improve oral proficiency. Will not count for major or minor.

321, 322. Third-Year Portuguese Grammar and Composition. (3:3:0 ea.) Prerequisite: Port 202 and 16 hours of Portuguese or the equivalent.

326. Portuguese Phonetics and Pronunciation. (3:3:3) Prerequisite: Port 321 or equivalent.

Underlying concepts of Portuguese speech production and applications to pronunciation.

329. Survey of Luso-Brazilian Linguistics. (3:3:0) Prerequisite: Port 321 or equivalent.

Introduction to linguistics of Portuguese: phonetics, phonology, morphology, syntax, semantics, history of the Portuguese language, philology, dialectology, sociolinguistics, and psycholinguistics.

339. Introduction to Portuguese and Brazilian Literature. (3:3:0) Prerequisite: Port 321 or equivalent.

Readings in modern literature; formal literary analysis.

345. Portuguese Civilization. (3:3:0) Prerequisite: Port 321 or equivalent.

Culture, history, art, music, and traditions of Portugal.

355. Brazilian Civilization. (3:3:0) Prerequisite: Port 321 or equivalent.

Culture, history, art, music, and traditions of Brazil.

395R. Contemporary Culture. (1–3:0:0 ea.) For Study Abroad programs only. Prerequisite: Port 201 or equivalent.

Contemporary Portuguese or Brazilian culture through study of the people and their customs and institutions.

399R. Cooperative Education: Portuguese Language Field Experience. (1–6:0:0 ea.) Prerequisite: consent of program coordinator. On-the-job experience.

441. Survey of Portuguese Literature. (3:3:0) Prerequisite: Port 339 or equivalent.

Literary periods, genres, and great writers of Portugal.

451. Survey of Brazilian Literature. (3:3:0) Prerequisite: Port 339 or equivalent.

Literary periods, genres, and great writers of Brazil.

480R. Directed Research in Portuguese. (1–3:Arr:0 ea.) Prerequisite: written proposal subject to department approval.

Under direction of faculty member, student designs and conducts research project that covers material not normally presented in regular course work. Research paper required. Total Port 480R credit toward bachelor's degree not to exceed 3 hours.

490. Senior Seminar in Portuguese. (1–3:0:0) Prerequisite: senior standing.

Bibliography, research, and writing of senior thesis. Recommended for students planning graduate studies in Portuguese.

491. Senior Proficiency Evaluation. (0:1:0)

Tool course to meet oral proficiency requirement for all majors. No major or minor credit.

499R. Honors Thesis. (1–6:Arr.:Arr. ea.)

Advanced Undergraduate or Graduate Courses

520. **Advanced Portuguese Grammar.** (3:3:0) Prerequisite: Port 321.

Applying contemporary grammatical concepts to problems in Portuguese grammar.

521. **Romance Philology.** (3:3:0) Prerequisite: Port 321.

Comparative study of evolution of Latin into modern romance languages.

522. **History of the Portuguese Language.** (3:3:0) Prerequisite: Port 321.

Linguistic sources that contributed to formation of Portuguese.

529R. **Special Topics in Portuguese Linguistics.** (3:3:0 ea.) Prerequisite: Port 321.

Topics from semantics to dialectology to sociolinguistics.

539R. **Luso-Brazilian Theatre Production.** (3:3:0 ea.)

Theory and practice of dramatic performance. Includes participation in play to be performed during semester.

Note: No more than 3 hours of 539R credit may count toward any degree.

542. **Camões.** (3:3:0) Prerequisite: Port 441 or equivalent.

549R. **Special Topics in Portuguese Literature.** (3:3:0 ea.) Prerequisite: Port 441 or equivalent.

552. **Machado de Assis.** (3:3:0) Prerequisite: Port 451 or equivalent.

553. **Twentieth-Century Brazilian Literature.** (3:3:0) Prerequisite: Port 451 or equivalent.

559R. **Special Topics in Brazilian Literature.** (3:3:0 ea.) Prerequisite: Port 451 or equivalent.

580R. **Directed Research in Portuguese.** (1-3:Arr.:0 ea.) Prerequisite: written proposal subject to department approval.

Under direction of a faculty member, student designs and conducts research project that covers material not normally presented in regular course work. Research paper required. Total 580R credit toward MA degree may not exceed 3 hours. For graduate students only.

599R. **Cooperative Education: Portuguese Internship.** (1–3:0:0 ea.) Prerequisite: Port 321 and instructor's consent.

For supervised internship credit on BYU Study Abroad programs only.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

601A. **Portuguese Linguistics and Research Methodology.** (3:3:0)

601B. **Portuguese Literary Theory and Research Methodology.** (3:3:0)

629R. **Seminar in Portuguese Linguistics.** (3:3:0 ea.)

649R. **Seminar in Portuguese Literature.** (3:3:0 ea.)

659R. **Seminar in Brazilian Literature.** (3:3:0 ea.)

698R. **Master's Project.** (1–6:Arr.:Arr. ea.)

699R. **Master's Thesis.** (1–9:Arr.:Arr. ea.)

Spanish (Span)

Undergraduate Courses

100A. **Introductory Spanish.** (2:3:1) Independent Study also. First semester for those who have had no Spanish and desire maximum time for assimilation.

100B. **Second Semester, Introductory Spanish.** (2:3:1) Prerequisite: Span 100A. Continuation of Span 100A.

101, 102. **First-Year Spanish.** (4:5:2 ea.) For students with little or no previous Spanish. Fundamentals of Spanish, emphasizing communication. (Accelerated sections available for those with more language experience.) Placement exam required.

121, 122. **Intensive Reading in Spanish.** (4:4:0 ea.) For students with little or no Spanish.

Developing reading skills in area of student's specialization. Graduate students will be graded pass/fail; undergraduate students will receive letter grades.

199R. **Cooperative Education.** (1–3:Arr.:Arr. ea.) Prerequisite: consent of both department chair and cooperative education coordinator. Work experience evaluated by supervisor and posted on student's transcript.

201. **Second-Year Spanish.** (4:5:1) Independent Study also. Prerequisite: Span 102, three units of high school Spanish, or placement by diagnostic test.

Review of grammar, reading, writing, conversation.

202. **Spanish Reading and Comprehension.** (3:3:1) Prerequisite: Span 201.

Fourth-semester class introducing culture and grammar through study of literature. Not for returned missionaries.

211R. **First-Semester Conversation.** (2:2.5:1 ea.) Prerequisite: Span 102 or equivalent. Recommended: concurrent registration in Span 201.

212. **Second-Semester Conversation.** (2:2.5:1) Prerequisite: Span 211 or equivalent. Recommended: concurrent registration in Span 201 or 202.

302. **Advanced Spanish Grammar, Reading, and Culture.** (3:3:0) Native speakers should take Span 321.

Introduction of culture, literature, and grammatical concerns through reading short stories, novels, and drama in Spanish. First class for returned missionaries.

311R. **Spanish Oral Proficiency Preparation.** (2:2:1 ea.) Prerequisite: Span 212 or equivalent.

Tools course to help students meet oral proficiency requirements for major and minor. Will not count for major or minor.

321. **Third-Year Spanish Grammar and Composition.** (3:3:0) Independent Study also. Prerequisite: Span 202, 302, or equivalent.

Intensive study and practice with Spanish grammar, vocabulary, and writing.

322. **Third-Year Spanish Grammar and Stylistics.** (3:3:0) Independent Study also. Prerequisite: Span 321.

Continuation of Span 321, with increased emphasis on stylistics of writing and addition of word processing skills.

326. **Spanish Phonetics and Pronunciation.** (3:3:0) Prerequisite: Span 202, 302, or equivalent.

Underlying concepts of Spanish speech production and applications to pronunciation.

329. **Survey of Hispanic Linguistics.** (3:3:0) Prerequisite: Span 321 or equivalent.

Introduction to linguistics of Spanish: phonetics, phonology, morphology, syntax, semantics, history of the Spanish language, philology, dialectology, sociolinguistics, and psycholinguistics.

339. **Introduction to Spanish Literature.** (3:3:0) Independent Study also. Prerequisite: Span 202, 302, or equivalent. Course is prerequisite to 400-level literature courses. Readings in modern Hispanic literatures, focusing on formal literary analysis.

345. **Iberian Civilization.** (3:3:0) Prerequisite: Span 202, 302, or equivalent.

Culture, history, art, music, and traditions of Spain.

355. **Ibero-American Civilization.** (3:3:0) Prerequisite: Span 202, 302, or equivalent.

Culture, history, art, music, and traditions of Spanish America.

365. **Mexican-American Culture.** (3:3:0) Prerequisite: Span 202, 302, or equivalent.

Contemporary culture (education, popular and fine arts, worldview, attitudes, etc.) of the Mexican-American in the U.S.

Note: Prospective teachers should take Span 377 and 378 just before student teaching and after as many upper-division Spanish courses as possible.

Spanish-teaching majors and minors must take both Span 377 and 378.

Prospective student instructors must take Span 377 before employment, but preference

will be given to candidates who have taken both Span 377 and 378.

377. Spanish Language Teaching Procedures 1. (3:3:2) Prerequisite: Span 321, 326; 345 or 355; and, for certification, ScEd 276.

Mastery of skills specific to foreign language instruction with emphasis on skills taught in first-year courses.

378. Spanish Language Teaching Procedures 2. (3:3:2) Prerequisite: Span 377.

Mastery of skills specific to foreign language instruction; emphasizes skills taught in intermediate courses (reading, writing, testing, and nontraditional methodologies).

395R. Contemporary Culture. (1-3:Arr.:Arr. ea.) For Study Abroad programs only. Prerequisite: Span 102 or equivalent.

Contemporary Spanish (or Spanish-American) culture through study of the people and their customs and institutions.

399R. Cooperative Education: Spanish Language Field Experience. (1-6:0:0 ea.) Prerequisite: consent of program coordinator. On-the-job experience.

423. Border Spanish. (3:3:0) Prerequisite: Span 321 or equivalent.

Mexican-American speech patterns and their impact on the Spanish-speaking American subculture.

425. Structure of the Spanish Language. (3:3:0) Prerequisite: Span 321.

Contrastive analysis of phonology and grammatical structures of Spanish and English.

427. Beginning Translation and Interpretation 1. (3:3:1) Prerequisite: Span 321, 322, with a B grade or better.

Introduction to history, theory, and principles of translation and interpretation.

428. Beginning Translation and Interpretation 2. (3:3:0) Prerequisite: Span 427.

Systematic study and contrastive exercises in translation and interpretation. Translation of texts in general conceptual fields.

441. Survey of Spanish Literature. (3:3:0) Independent Study also. Prerequisite: Span 339.

Literary masterpieces of Spain.

451. Survey of Hispanic-American Literature. (3:3:0) Independent Study also. Prerequisite: Span 339.

Literary masterpieces of Spanish America.

461R. Spanish-speaking American (Mexican-American) Literature. (3:3:0 ea.) Prerequisite: Span 339 or instructor's consent.

Spanish-English literature of the Mexican-American within the United States.

480R. Directed Research in Spanish. (1-3:Arr.:0 ea.) Prerequisite: written proposal subject to department approval.

Under direction of faculty member, student designs and conducts research project that covers material not normally presented in regular course work. Research paper required. Total Span 480R credit toward bachelor's degree not to exceed 3 hours.

490. Senior Seminar in Spanish. (3:3:0) Prerequisite: senior standing.

Bibliography, research, and writing of senior thesis. Recommended for students planning graduate studies in Spanish.

491. Senior Proficiency Evaluation. (0:1:0)

Tool course to meet oral proficiency requirement for all majors and teaching minors. No major or minor credit.

499R. Honors Thesis. (1-6:Arr.:Arr. ea.)

Advanced Undergraduate or Graduate Courses

520. Advanced Spanish Grammar. (3:3:0)

Application of contemporary grammatical concepts to problems in Spanish grammar.

521. Romance Philology. (3:3:0)

Comparative study of evolution of Latin into modern romance languages.

522. History of the Spanish Language. (3:3:0)

Linguistic sources that contributed to formation of the Spanish language.

527. Translation and Interpretation 1. (3:3:0) Prerequisite: Span 428.

Translation of texts in specific fields. Simultaneous interpretation.

528. Translation and Interpretation 2. (3:3:0) Prerequisite: Span 527.

Individual translation and/or interpretation projects.

529R. Special Topics in Spanish Linguistics. (3:3:0 ea.) Prerequisite: Span 520, 522.

Topics include semantics, dialectology, or sociolinguistics.

539R. Hispanic Theatre Production. (3:3:0 ea.) Prerequisite: consent of director.

Theory and practice of dramatic performance. Includes participation in play to be performed during semester.

Note: No more than 3 hours of 539R credit may count toward any degree.

540. Medieval Spanish Literature. (3:3:0) Prerequisite: Span 441 or equivalent.

Spanish literature from *El Cantar de Mío Cid* (1140) through *La Celestina* (1499).

543. Golden Age Literature. (3:3:0) Prerequisite: Span 441 or equivalent.

Sixteenth- and seventeenth-century Spanish literature.

544. *Don Quijote*. (3:3:0) Prerequisite: Span 441 or equivalent.

In-depth study of Cervantes' *El ingenioso hidalgo don Quijote de la Mancha*.

546. Nineteenth-Century Literature. (3:3:0) Prerequisite: Span 441 or equivalent.

Romanticism (1770s through 1870s) or the novels of Benito Pérez Galdós and his contemporaries.

548. Twentieth-Century Spanish Literature. (3:3:0) Prerequisite: Span 441 or equivalent.

Genre (twentieth-century novel, drama, or poetry) or particular school (Generation of 1898, Generation of 1927, etc.) emphasized.

549R. Special Topics in Spanish Literature. (3:3:0 ea.) Prerequisite: Span 441 or equivalent.

Specific topics in Spanish (peninsular) literature. Course content will vary each semester to offer optimum exposure to all areas of Spanish literature.

550. Pre-Columbian and Colonial Literature. (3:3:0) Prerequisite: Span 451 or equivalent.

Indigenous literature (Maya, Nahuatl, etc.) and other texts written in Spanish Colonial America through eighteenth century.

554. The Spanish American Novel. (3:3:0) Prerequisite: Span 451 or equivalent.

Selected Spanish-American novelists such as Juan Rulfo, Gabriel García Márquez, Alejo Carpentier, Mario Vargas, Llosa, etc.

555. Spanish American Poetry. (3:3:0) Prerequisite: Span 451 or equivalent.

Selected Spanish-American poets, movements, and national traditions.

556. Spanish American Drama. (3:3:0) Prerequisite: Span 451 or equivalent.

Twentieth-century theatre from Spanish America and Brazil.

558. Hispanic-American Short Story. (3:3:0) Prerequisite: Span 451 or equivalent.

Introduction and development of an important literary genre in Spanish America, including works of Jorge Luis Borges, Julio Cortázar, Juan Rulfo, Gabriel García Márquez, etc.

559R. Special Topics in Spanish-American Literature. (3:3:0 ea.) Prerequisite: Span 451 or equivalent.

Specific topics in Latin American literature. Course content will vary each semester to offer optimum exposure to all areas of Latin American literature.

577. Spanish Language Teaching Procedures. (3:3:2) For public school teachers.

Mastery of skills specific to foreign language instruction. Lectures, demonstrations, practical experience.

580R. Directed Research in Spanish. (1-3:Arr:0 ea.) Prerequisite: written proposal subject to department approval.

Individualized study. Under direction of faculty member, student designs and conducts research project that covers material not normally presented in regular course work. Research paper required. Total 580R credit toward MA degree may not exceed 3 hours.

599R. Cooperative Education: Spanish Internship. (1-3:0:0 ea.) Prerequisite: Span 321 and instructor's consent.

For supervised internship credit on BYU Study Abroad programs only.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

601A. Hispanic Linguistics and Research Methodology. (3:3:0)

601B. Hispanic Literary Theory and Research Methodology. (3:3:0)

601C. Research Design in Hispanic Language Teaching. (3:3:0)

620. Core Course in Hispanic Linguistics. (3:3:0)

622. Hispanic Dialectology. (3:3:0)

625. Spanish Morphosyntax. (3:3:0)

626. Spanish Phonetics and Phonology. (3:3:0)

629R. Seminar in Spanish Linguistics. (3:3:0 ea.)

649R. Seminar in Spanish Literature. (3:3:0 ea.)

659R. Seminar in Spanish-American Literature. (3:3:0 ea.)

671. Principles of Foreign Language Learning and Teaching. (3:3:0)

672. Media and Technology in Foreign Language Instruction. (3:3:0)

673R. Directed Teaching of Spanish. (1-3:3:0 ea.)

674. Teaching Hispanic Culture. (3:3:0)

676. Principles of Testing Foreign Language Skills. (3:3:0)

678. Research Design in Foreign Language Instruction. (3:3:0)

679R. Seminar in Teaching Spanish. (3:3:0 ea.)

698R. Master's Project. (1-6:Arr:Arr. ea.)

699R. Master's Thesis. (1-9:Arr:Arr. ea.)

Sports

See Physical Education.

Statistics

Leland J. Hendrix, Chair (230 TMCB)

Professors

Bryce, Gale Rex (1972) AA, Phoenix Coll., 1963; BS, Arizona State U., 1967; MS, Brigham Young U., 1970; PhD, U. of Kentucky, 1974.

Christensen, Howard B. (1967) BS, Brigham Young U., 1964; MS, PhD, North Carolina State U., 1966, 1975.

Collings, Bruce J. (1988) BS, MS, MS, Brigham Young U., 1973, 1975, 1977; MS, PhD, U. of North Carolina, 1980, 1981.

Hendrix, Leland J. (1967) BS, MA, PhD, Brigham Young U., 1960, 1966, 1967.

Hilton, H. Gill (1962) BS, Brigham Young U., 1957; MS, PhD, North Carolina State U., 1960, 1962.

Rencher, Alvin C., Associate Dean (1963) BS, MA, Brigham Young U., 1959, 1962; PhD, Virginia Polytechnic Inst., 1968.

Scott, Del T. (1977) BS, MS, Brigham Young U., 1970, 1973; PhD, Pennsylvania State U., 1977.

Tolley, H. Dennis (1983) BS, Brigham Young U., 1970; PhD, U. of North Carolina, 1974; ASA, Society of Actuaries, 1981.

Associate Professors

Beus, Gary B. (1967) BA, Brigham Young U., 1962; MS, PhD, Virginia Polytechnic Inst., 1965, 1968.

Lawson, John S. (1986) AA, Los Angeles Valley Coll., 1967; BS, MS, Brigham Young U., 1969, 1971; MS, Rutgers U., 1976; PhD, Polytechnic Inst. of New York, 1983.

Assistant Professors

Fellingham, Gilbert W. (1990) BA, Occidental Coll., 1971; MS, MS, Brigham Young U., 1976, 1977; MS, PhD, U. of Washington, 1988, 1990.

Grimshaw, Scott D. (1993) BS, Southern Utah State Coll., 1983; MS, PhD, Texas A&M U., 1985, 1989.

Madrigal, Jose L. (1991) BS, Leon State U., 1976; MS, Postgraduate Coll., 1981; DPhil, U. of Oxford, England, 1985.

Schaalje, G. Bruce (1992) BS, MS, Brigham Young U., 1977, 1979; MS, U. of Washington, 1981; PhD, North Carolina State U., 1988.

Visiting Professor

Branstetter, R. Deane (1986) BS, Northeast Missouri State U., 1940; MS, State U. of Iowa, 1948; PhD, Iowa State U., 1953.

Lecturer

Collings, Patti Burton (1988) BS, MS, Brigham Young U., 1971, 1977.

Adjunct Professors

Booth, Gordon D. (1981) BA, BS, Brigham Young U., 1960, 1963; MS, PhD, Iowa State U., 1967, 1973.

Hilton, John L. (1988) AB, Brigham Young U., 1952.

Emeriti

Adams, L. LaMar (1970) BS, MEd, PhD, Brigham Young U., 1961, 1965, 1972.

Campbell, L. Howard (1962) BS, MBA, U. of Utah, 1955, 1957.

Carter, Melvin W. (1961) BS, Arizona State Coll., 1953; MS, PhD, North Carolina State U., 1954, 1956.

Nielson, Howard C. (1957) BS, U. of Utah, 1947; MS, U. of Oregon, 1949; MBA, PhD, Stanford U., 1956, 1957.

Richards, Dale O. (1963) BS, Utah State U., 1950; MS, PhD, Iowa State U. of Science and Technology, 1957, 1963.

Programs and Degrees

BS Statistics—Quality Science
BS Statistics

Emphases:

Statistical Science
Computer Science
Actuarial Science
Business

BS Honors in Statistics and University Honors

MS Statistics

The curriculum and degrees offered through the Department of Statistics are designed to equip students with decision-making skills for careers as professional statisticians in industrial organizations, government agencies, insurance companies, universities, and research institutes. The technical tools statisticians acquire are useful in many areas, and for this reason a statistics degree is also excellent preparation for professional programs in law, business administration, public administration, and actuarial science.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Required High School Preparation

Note: It is recommended that a student complete the following courses in high school:

3 units of English
1 unit of physical science, either chemistry or physics.

Because mathematics provides the foundation for all work in the physical and mathematical sciences, particular attention is paid to high school preparation in this subject.

4 units of mathematics, consisting of 2.5 units of algebra, 1 unit of geometry, and 0.5 unit of trigonometry. This should qualify students to begin college mathematics with Math 112, analytic geometry and calculus.

To decide which mathematics course should be taken first, write to the Mathematics Department, 292 TMCB, and request a mathematics placement test.

Core Requirements for All Degree Programs in Statistics

I. Major courses: Stat 211, 222 (section for majors available), 321, (or 520, 521), 322, 334, 336, 337, 361, 411.

II. Supporting courses: Math 112, 113, 343, 344; Engl 316, CS 130, 131. (CS 130 is exempt for the computer science emphasis.)

BS Statistics—Quality Science

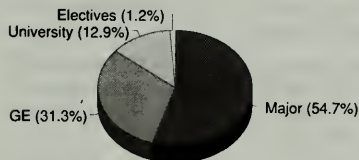
I. In addition to above core requirements: Stat 462, 466.

II. Supporting courses: Either Option 1 or Option 2.

A. Option 1: MET 131, MFE 340, 362, 475, 476, MeEn 473 (MFE 232 can substitute for MeEn 473); three courses from Acc 200, BusM 300, 340, 361, OrgB 320, ManEc 300.

B. Option 2: Acc 200, BusM 300, 340, 361, OrgB 320, ManEc 300; three courses from MET 131, MFE 340, 362, 475, 476, MeEn 473 (MFE 232 can substitute for MeEn 473).

Summary of Degree Requirements for BS Statistics—Quality Science



1. Total hours 128.0
2. Major hours[♦] 70.0
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 1.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer

credits substantially increases the cost and the number of semesters to graduate.

[♦]Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

Option 1: Engineering

First Year	F	W
Stat 211		1
Stat 222, 334	4	3
Math 112, 113	4	4
CS 130, 131	2	2
Electives	6	6

Second Year		
Stat 322, 321	1	3
Stat 336, 337	3	3
Stat 361, 411	3	2
MET 131, 232	3	3
Electives	6	5

Third Year		
Econ 110, Engl 316	3	3
Math 343, 344	3	3
MFE 362, Acc 200	3	3
OrgB 320, MFE 340	3	3
Other electives	4	4

Fourth Year		
Stat 462, 466	3	3
MFE 475, 476	3	3
BusM 360	3	
Electives	7	10

Option 2: Management

First Year	F	W
Stat 211		1
Stat 222, 334	4	3
Math 112, 113	4	4
CS 130, 131	2	2
Electives	6	6

Second Year		
Stat 322, 321	1	3
Stat 336, 337	3	3
Stat 361, 411	3	2
Acc 200, MFE 232	3	3
Electives	6	5

Third Year		
Econ 110, Engl 316	3	3
Math 343, 344	3	3
BusM 300, 360	3	3
OrgB 320, BusM 340	3	3
Electives	4	4

Fourth Year		
Stat 462, 466	3	3
MFE 475, 476	3	3
ManEc 300	3	
Electives	7	10

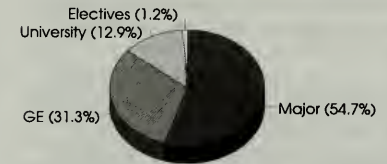
BS Statistics: Statistical Science Emphasis

I. In addition to above core requirements: Stat 341 and six* courses from 370, 435, 462, 463, 466, 520, 521, 531, 534, 536, 537, 541, 545, 563 (Econ 388 or 588 may be counted as one of these courses).

II. Supporting courses: 12 hours from no more than two approved scientific

disciplines.** A minor in a scientific discipline may satisfy this 12-hour requirement.

Summary of Degree Requirements for BS Statistics: Statistical Science Emphasis



1. Total hours 128.0
2. Major hours[♦] 70.0
3. General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
4. University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
5. Elective hours 1.5
6. 40 hours upper-division GPA requirement of 2.0
7. Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

[♦]Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
Stat 211		1
Stat 222, 334	4	3
Math 112, 113	4	4
CS 130, 131	2	2
Electives	6	6

Second Year		
Stat 322, 321	1	3
Stat 336, 337	3	3
Stat 361, 411	3	2
Electives	9	8

Third Year		
Stat 341		3
Math 343, 344	3	3
Engl 316	3	
Statistics electives*	3	3
Other electives	7	7

Fourth Year		
Statistics electives*	6	6
Other electives	10	10

*Statistics electives (six courses from the following):

Stat 370, 435	3	3
Stat 462, 466	3	3
Stat 463, 563	3	3

Statistics

Stat 520, 521	3	3
Stat 534, 531	3	3
Stat 536, 537	3	3
Stat 541, 545		3,3

BS Statistics: Computer Science Emphasis

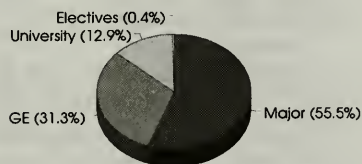
I. In addition to above core requirements:

Stat 341 and one* course from 462, 463, 520, 521, 531, 534, 536, 541.

II. Supporting courses: CS 142, 143, 152, 153, 232, 252, and one course from CS 428, 431, 444, 451, 453, 455, or 470 and its supporting prerequisites for a minimum total of 9 hours of at least 300-level courses.

III. 6 hours from an approved scientific discipline.**

Summary of Degree Requirements for BS Statistics: Computer Science Emphasis



- Total hours 128.0
- Major hours* 71.0
- General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
- University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- Elective hours 0.5
- 40 hours upper-division GPA requirement of 2.0
- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
Stat 211		1
Stat 222, 334	4	3
Math 112, 113	4	4
CS 131		2
Electives	8	6
Second Year		
Stat 322, 321	1	3
Stat 336, 337	3	3
Stat 361, 411	3	2
CS 142, 143	2	2
Electives	7	6

Third Year		
Stat 341	3	
Math 343, 344	3	3
CS 152, 153	2	2
CS 232, 252	2	2
Engl 316	3	
Statistics electives*		3
Other electives	3	6

Fourth Year

Computer science electives**	6	3
Other electives	10	13

*Statistics electives (one course from the following):

Stat 462	3	
Stat 463	3	
Stat 520, 521	3	3
Stat 534, 531	3	3
Stat 536	3	
Stat 541		3

**Computer science electives: One 400-level class from the following list with appropriate prerequisites (must total 9 or more credit hours of courses numbered 300 or higher: CS 428, 431, 444, 451, 453, 455, 470).

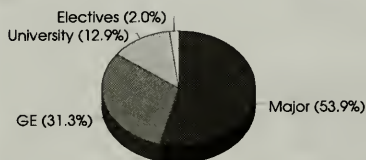
BS Statistics: Actuarial Science Emphasis

I. In addition to above core requirements:

Stat 341, 370, 435, 463, 520, 521; two semesters of 470R; four courses from Stat 462, 531, 534, 536, 537, 541, 545, 563, Econ 253, 588, Soc 329, 365, Zool 205.

II. Supporting courses: Econ 110, Math 311.

Summary of Degree Requirements for BS Statistics: Actuarial Science Emphasis



- Total hours 128.0
- Major hours* 69.0
- General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
- University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- Elective hours 2.5
- 40 hours upper-division GPA requirement of 2.0
- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
Stat 211		1
Stat 321, 334	4	3
Math 112, 113	4	4
CS 130, 131	2	2
Electives	6	6

Second Year

Stat 322, 341	1	3
Stat 336, 337	3	3
Stat 361, 411	3	2
Math 343, 344	3	3
Electives	6	5

Third Year

Stat 520, 521	3	3
Stat 470	1	1
Engl 316, Stat 435	3	3
Statistics electives*	3	3
Other electives	6	6

Fourth Year

Econ 110, Stat 370	3	3
Stat 463, Math 311	3	3
Statistics electives*	6	6
Other electives	5	5

*Statistics electives (four courses from the following):

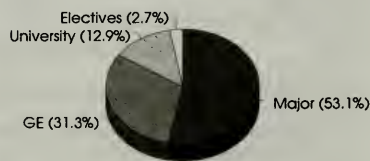
Stat 462, 537	3	3
Stat 534, 531	3	3
Stat 536, 563	3	3
Stat 541, 545		3,3
Econ 253, 588		3,3
Soc 329, 365		3,2
Zool 205	3	

BS Statistics: Business Emphasis

I. In addition to above core requirements: Stat 341, 370, 536.

II. Supporting courses: Acc 200; BusM 300, 340; 380R, 381R or 382R; OrgB 320; Econ 110; three courses from Acc 320, ManEc 300, 487, 489, Stat 463.

Summary of Degree Requirements for BS Statistics: Business Emphasis



- Total hours 128.0
- Major hours* 68.0
- General Education requirements 40.0
 - Core 15.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
- University requirements 16.5

Religion	14.0
PE/Health	2.5
5. Elective hours	3.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦ **Note:** Hours do not include any course that could be used to fill GE or university requirements.

Suggested Sequence of Courses

First Year	F	W
Stat 211		1
Stat 222, 334	4	3
Math 112, 113	4	4
CS 130, 131	2	2
Electives	6	6
Second Year		
Stat 322, 321	1	3
Stat 336, 337	3	3
Stat 361, 411	3	2
Math 343, 344	3	3
Electives	6	5
Third Year		
Econ 110, Stat 341	3	3
Acc 200, Stat 370	3	3
BusM 340, 300	3	3
Engl 316	3	
Statistics electives*	3	3
Other electives	1	4
Fourth Year		
Stat 536, OrgB 320	3	3
BusM 380R	1	
Statistics electives*	3	or 3
Other electives	9–12	10–13

*Statistics electives (three courses from the following):

Stat 463	3	
Acc 320	3	
ManEc 300	3	or 3
ManEc 487		3
ManEc 489	3	3

*Students who plan to get an MS degree in statistics should take Stat 520, 521.

**The following approved scientific discipline courses can be taken without prior approval: Biol 130; Botny 210 or above (except 220); Chem 105 or above; CS 152 or above (not to be taken by statistics-computer science majors); Geol 440; Math 311 or above (except 343, 344); Mbio 221 or above; Phscs 121, 122, 221, 222; Zool 204 or above (except 227, 229); any engineering course with prerequisite of Math 112 or above.

Other courses can be taken only by prior approval of the Statistics Department chair or assistant chair.

No course can count toward both the approved area and GE or other requirements.

Minor

Stat 211, 222, 322, 336, and other statistics courses above 300 except 552 and 554. Stat 501 can be taken in place of (not in addition to) Stat 222 and 336.

Minor hours req.: 14

BS with Honors in Statistics and University Honors

I. Honors requirements: The Honors General Education graduation requirements as listed in the Honors Education section of this catalog.

- A. The Foreign Language proficiency requirement should be met in French, German, Japanese, Spanish, Russian, or an approved alternative.
- B. It is recommended that the History of Civilization track requirement be met by Phil 201H, 202H.
- C. General Education requirements not met by AP credit are to be filled by Honors sections of the GE courses where available.

II. Statistics requirements (any deviations must be approved by the chair of the Department of Statistics):

- A. Stat 222H; Math 112H, 113H, 343, 344; RelC 491, 492 (taught in the College of Physical and Mathematical Sciences); either Phil 210, 211, or Math 300, Phil 314; Engl 316H.
- B. Honors thesis: The thesis must satisfy all requirements of the University Honors Program. Written under the direction of one of the statistics faculty, it must represent original research regarding statistical methodology, theory, or an area of application. The proposed thesis topic must be approved in advance by the chair of the Department of Statistics. An oral report of the research must be presented to the faculty and students either at the Spring Conference of the College of Physical and Mathematical Sciences or at a Department of Statistics seminar.

Statistics (Stat)

Undergraduate Courses

105. Introduction to Statistics. (3:3:2) F, W, Sp
Prerequisite: Math 97.

Fundamental ideas and applications of statistics. Not a GE course.

199R. Cooperative Education. (1–3:Arr.:Arr. ea.) F, W, Sp, Su
Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

211. Introduction to Statistical Computing. (1:1:1) F, W, Sp
Prerequisite: Math 110 and instructor's consent.

Computer techniques for integrating current hardware and software into a statistical computing environment.

221. Principles of Statistics 1. (3:3:2) F, W, Sp, Su
Independent Study also. Prerequisite: Math 110 or equivalent.

Stemplots, boxplots, histograms, scatterplots; central tendency, variability; confidence intervals and hypothesis testing involving one and two means and proportions; contingency tables, regression; computer package.

222. Principles of Statistics 2. (4:4:2) F, W, Sp, Su
Honors and Independent Study also. Prerequisite: Math 110 or equivalent.

Three-fourths of the course covers material identical to Stat 221. One-fourth covers analysis of variance and multiple regression and is identical to Stat 223.

223. Principles of Statistics 3. (1:0:0)
Independent Study only. Prerequisite: Math 110 or equivalent; Stat 221 or equivalent.

Introduction to analysis of variance and multiple regression.

321. Elements of Mathematical Statistics. (3:3:2) F, W, Sp, Su
Independent Study also. Prerequisite: Math 113 or 119 or equivalent.

Probability, random variables, frequency distributions, estimation and tests of hypotheses from a theoretical standpoint.

322. Matrix Computations in Statistics. (1:1:0) F, W, Sp
Prerequisite: Math 110; Stat 211 or concurrent registration.

Basic matrix operations, inverses, quadratic forms, rank, canonical forms, eigenvalues and eigenvectors, symmetric matrices, idempotent matrices, orthogonal matrices, positive definite matrices, manipulations using the computer.

334. Methods of Survey Sampling. (3:3:0) F, W
Prerequisite: Stat 221 or equivalent. Recommended: Stat 211.

Sampling frames, questionnaire design; simple random, systematic, stratified, and cluster sampling methods, comparing domain means, contingency table analysis.

336. Statistical Methods 1. (3:3:0) F, W
Prerequisite: Stat 222; 211, 322, or concurrent registration. Recommended: concurrent registration in Stat 361.

Simple estimation and hypothesis testing, nonparametric analogs for t-tests, contingency tables, introduction to completely randomized designs, multiple regression.

337. Statistical Methods 2. (3:3:0) F, W
Prerequisite: Stat 336; Stat 361, 411, or concurrent registration.

Completely randomized, randomized block, Latin, and Graeco-Latin square designs; split plots, model writing, fixed model analysis of covariance, nonparametric analogs of standard designs.

341. Elementary Probability. (3:3:0) F, W, Su Independent Study also. Prerequisite: Math 113 or equivalent.

Combinations; permutations; binomial, Poisson, multinomial, and hypergeometric distributions; combinatorial probability.

361. Quality Improvement for Industry. (3:3:1) F, W, Sp Prerequisite: Math 113, 119, or instructor's consent.

Quality management philosophies (Deming, etc.) Strategies for continuous improvement. Graphical and numerical methods of data analysis. Process control charts. Design and analysis of experiments for process characterization and improvement.

370. Applied Time Series and Forecasting. (3:3:0) W Prerequisite: Stat 336.

Univariate time series, univariate Box-Jenkins methodology, ARIMA models, nonstationary models, model building, forecasting, seasonal analysis, case studies.

411. Introduction to Statistical Software. (2:2:2) F, W Prerequisite: Stat 211; 337 or 502 and instructor's consent.

Software packages SPSS, SAS, S, BMDP, and other statistical software.

421. Probability and Distribution Theory. (3:3:0) F, W, Prerequisite: Math 215 or 344.

Mathematical formulation of continuous and discrete random variables, including underlying probability models, distribution functions, conditional and marginal probability laws, convolutions and other functions of random variables, limiting distributions.

435. Analysis of Categorical and Other Nonparametric Data. (3:3:0) W Prerequisite: Stat 222; Stat 341 or instructor's consent.

Nonparametric analogs of classical parametric methods, 2x2 log linear models, contingency tables, the Mantel-Haenszel test, stratified analysis, conditional independence, collapsibility and life tables.

462. Quality Control and Industrial Statistics. (3:3:2) F Prerequisite: Stat 321, 361. Recommended: Stat 336.

Intermediate concepts in process analysis, process control, and control chart procedures; Pareto diagrams, cause-effect diagrams; acceptance sampling.

463. Operations Research. (3:3:2) F Prerequisite: Math 112 or 119, Stat 321.

Methods of linear, goal, and dynamic programming; queuing theory and applications, network analysis and PERT-CPM, decision analysis, simulation.

466. Introduction to Reliability. (3:3:2) W Prerequisite: Stat 321 or 361 and instructor's consent; Math 215 or 344.

Mathematics, distributions, management, and maintenance of basic reliability concepts; collection and analysis of test data; fault tree analysis; applying reliability in various areas.

470R. Actuarial Practice. (1:1:0 ea.) F, W Prerequisite: Math 113, Stat 336.

Application of statistical and mathematical methods to current insurance problems; projects in life table construction, premium estimation, rating and product design.

490R. Special Topics in Statistics. (1-3:Arr.:0 ea.) On dem. Prerequisite: instructor's consent.

497R. Introduction to Statistical Research. (1-3:0:6 ea.) F, W, Sp, Su Prerequisite: consent of department chair.

Review of current literature and survey of present status of significant statistical research; collaborative work between student and faculty.

499R. Honors Thesis. (1-6:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of department chair.

Advanced Undergraduate or Graduate Courses

501. Statistics for Research Workers 1. (5:5:0) F, W, Sp Prerequisite: Math 110 or equivalent. Recommended: concurrent registration in Stat 211, 322.

Probability, estimation, tests of hypotheses, regression, analysis of variance, and nonparametric methods. For natural or social science students.

502. Statistics for Research Workers 2. (5:5:0) W, Su Prerequisite: Stat 501 or equivalent.

Analysis of covariance, multiple regression, linear models, design of experiments, and sampling. For natural or social science students.

520. Statistical Theory 1. (3:3:0) F Prerequisite: Math 344, Stat 321, 341.

Axiomatic probability theory for discrete and continuous random variables; moment-generating functions; conditional probability; stochastic independence; transformations; limiting distributions; stochastic convergence, central limit theorem.

521. Statistical Theory 2. (3:3:0) W Prerequisite: Stat 520.

Sufficiency and completeness; point and interval estimation; hypothesis testing; Cramer-Rao inequality; some asymptotic results; introduction to Bayesian methods.

522. Theory of Linear Models. (4:4:0) F Prerequisite: Stat 322, 520, Math 343.

Linear hypotheses, with application to regression and design.

531. Experimental Design. (3:3:0) W Prerequisite: Stat 337.

Power for basic designs, hierarchical designs, change-over designs, confounding in symmetric and asymmetric designs, incomplete block designs, bioassay, and response surface designs.

532. Quality Improvement for Engineering. (3:3:0) W on dem. Prerequisite: Stat 361, Math 113.

Selected topics in statistical theory, analysis of variance, simple and multiple regression, response surface design and analysis, multilevel experimental designs, blocking designs, confounding.

534. Sampling. (3:3:0) F even yr. Prerequisite: Stat 334; 321 or 341 or instructor's consent.

Estimation in systematic, simple random, stratified, cluster, PPS sampling, and mixtures of these; ratio estimation, sample size determination and principles of sample allocation.

536. Regression Analysis. (3:3:0) F Prerequisite: Stat 322; 336 or 501.

Multiple regression, introduction to model building and nonlinear estimation, examination of residuals, stepwise regression, subset selection procedures, biased estimation, and model validation.

537. Categorical Data Analysis. (3:3:1) W on dem. Prerequisite: Stat 337 or 502; 536.

Analysis of multiway contingency tables with linear and log-linear models using maximum likelihood and minimum modified chi-square estimates as appropriate.

541. Advanced Probability. (3:3:0) W on dem. Prerequisite: Stat 520 or instructor's consent.

Stochastic processes, Markov chains, generating functions, birth-death processes, random walks, the gambler's ruin problem, advanced combinatorial methods.

545. (Stat-ECEn 510) Stochastic Processes. (3:3:0) On dem. Prerequisite: Stat 421 or 520.

Review of elementary probability: expectation, characteristic functions, limit theorems. Introductory random processes: definitions and properties, covariance and spectral density, time average, stationarity, ergodicity, linear system relations, mean square estimation, Markov processes.

552. Statistical Methods in Education 1. (3:3:0) F, W, Su Prerequisite: Math 100 or equivalent.

Measures of central tendency, variability; correlation; simple linear regression; introduction to hypothesis testing and estimation. Computer applications. For graduate majors in education and related fields.

554. Statistical Methods in Education 2. (3:3:0) W, Su Prerequisite: Stat 552.

Applications of analysis of variance and covariance, multiple regression, correlation, and nonparametric methods. Introduction to experimental design. For graduate majors in education and related fields.

563. Advanced Operations Research. (3:3:0) W on dem. Prerequisite: Stat 463, 520.

Stochastic simulations; integer, nonlinear, and stochastic programming; developments in inventory theory; Markovian decision processes; insurance risks.

591R. Graduate Seminar in Statistics. (0:1:0 ea.) F, W

592. Statistical Consulting. (1:1:0) W

599R. Cooperative Education: Statistics. (2–9:0:0 ea.) F, W, Sp, Su Prerequisite: consent of department coordinator.

On-the-job experience. Report required.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

611. Multivariate Statistical Methods. (3:3:0)

621. Advanced Theory of Statistics. (3:3:0)

631. Advanced Experimental Design. (3:3:0)

636. Advanced Statistical Methods. (3:3:0)

662. Advanced Industrial Statistics and Reliability. (3:3:0)

690R. Advanced Special Topics. (3:3:0 ea.)

695R. Readings in Statistics. (1–3:2:0 ea.)

699R. Master's Thesis. (1–6:Arr.:Arr. ea.)

Student Development

David M. Sorenson, Chair (169 SWKT, 378-6291)

Professors

Goodson, William Dale (1965) BS, Ricks Coll., 1952; MS, EdD, Brigham Young U., 1956, 1969.

Heaps, Richard A. (1970) BS, Brigham Young U., 1966; MA, PhD, U. of Utah, 1968, 1970.

Herlin, Wayne R. (1964) BA, U. of Utah, 1953; MA, Stanford U., 1956; PhD, U. of Utah, 1963.

Sorenson, David M. (1969) BA, Brigham Young U., 1961; EdM, EdD, Harvard U., 1962, 1970.

Ward, G. Robert (1981) BS, MS, Utah State U., 1959, 1961; PhD, Michigan State U., 1965.

Clinical Professor

Bekker, Demoyne (1990) BA, MA, Brigham Young U., 1961, 1962; PhD, Ohio State U., 1968.

Chamberlain, Jonathan M. (1970) BA, Brigham Young U., 1958; MEd, PhD, U. of Wyoming, 1964, 1967.

Osborne, V. C. (1964) BA, MLS, Brigham Young U., 1950, 1968; PhD, U. of Utah, 1975.

Smart, David (1992) BA, Brigham Young U., 1964; MA, PhD, U. of Utah, 1967, 1969.

Tanner, Elvin (1970) BA, PhD, Brigham Young U., 1962, 1969; MSW, U. of Utah, 1964.

Associate Professors

Isakson, Richard L. (1983) BA, Weber State U., 1970; MS, Bucknell U., 1971; PhD, Cornell U., 1975.

Mouritsen, Maren M., Assistant Vice President and Dean of Student Life (1978) BS, Northwestern U., 1961; MS, PhD, Columbia U., 1968, 1978.

Winward, Edward (1959) BS, MS, Utah State U., 1959, 1960; PhD, U. of Missouri, 1966.

Associate Clinical Professors

Gleave, Robert L. (1989) BS, MEd, PhD, Brigham Young U., 1975, 1976, 1981.

Johnson, Richard W. (1969) BS, Utah State U., 1961; MS, U. of Wisconsin, 1964; PhD, Brigham Young U., 1968.

MacArthur, James D. (1973) BA, MA, PhD, Brigham Young U., 1969, 1973, 1976.

Ruiz, Chris C. (1992) BA, California State U., 1960; MSW, U. of Southern California, 1963; PhD, Claremont Graduate School, 1973.

Shively, Ann Pye (1991) BMEd, Sam Houston State U., 1958; MEd, PhD, Texas A & M U., 1966, 1971.

Assistant Professors

Maughan, Michael L. (1972) BS, MS, EdD, Utah State U., 1966, 1968, 1970.

Orme, G. Craig (1983) BS, MS PhD, Utah State U., 1972, 1974, 1980.

Assistant Clinical Professors

Bell, Douglas J. (1972) BS, Brigham Young U., 1970; MBA, U. of Utah, 1971; PhD, Brigham Young U., 1984.

Booth, Eileen E. (1989) BS, MEd, PhD, Brigham Young U., 1979, 1984, 1989.

Nielsen, Stevan L. (1988) BS, Brigham Young U., 1976; PhD, U. of Washington, 1984.

Scharman, Janet S. (1992) BA, MS, PhD, U. of Utah, 1970, 1990, 1992.

Smith, Steven A. (1992) BS, MEd, Brigham Young U., 1981; PhD, U. of Minnesota, 1988.

Clinical Instructors

Methner, Damaris H. (1991) BA, Colorado Coll., 1969; PhD, Fielding Institute, 1993.

Worthen, Vaughn E. (1991) AA, Ricks College, 1980; BS, MEd, Brigham Young U., 1983, 1985.

Emeritus

Day, Bartley E. (1978) BS, U.S. Military Academy, 1949; MA, Boston U., 1967; PhD, Brigham Young U., 1985.

The Student Development Department provides course work designed to help students in the areas of intellectual/learning, career, and personal/social development.

The Career and Learning Information Center, 100 SWKT, contains detailed, current information about numerous occupations, college majors, educational programs, professional licensing requirements for various states, placement information about recent BYU graduates, and career skills information, such as job interviewing.

Student Development (StDev)

Undergraduate Courses

110. Effective Study and Learning. (2:2:0) F, W, Sp Su

Learning to learn: motivation, time management, reading, listening, notetaking, test preparation, and memorizing; cognitive and ethical development in a learning environment.

115. Life Planning and Decision Making. (2:2:0) F, W, Sp, Su Independent Study also.

Individual development in life planning and decision making, emphasizing self-awareness as a basis for valuing, goal setting, and decision making in areas of common interest to college-age adults.

117. Career and University Exploration. (2:2:0) F, W, Sp, Su

Applying theories of individual, academic, and career development. Exploring university opportunities and college majors; planning graduation.

120. Development and Wellness in College. (2:2:0) F, W, Sp, Su

Applying theories of development and wellness to achieving healthy balance in meeting the life challenges facing college students.

198R. Prelaw Seminar. (1:1:0 ea.)

Choices in majors and prelegal education; the work of lawyers, judges, and other legal careers; role of law in our communities.

214R. Special Topics in Student Development. (1–3:1:0 ea.) On dem. Independent Study also.

317. Managing Life/Career Transitions. (2:2:2) F, W, Su Independent Study also.

Anticipating, preparing for, and managing critical transitions in life and careers (i.e., university to world of work, relocation, reentry, disability, retirement) from theoretical and applied points of view.

358R. Student Leadership Development. (1–3:2:2 ea.) F, W Prerequisite: instructor's consent.

Analysis, synthesis, and integration of personal leadership experienced in an academic context. Successful leadership: decision making, communications, planning, team building, motivation, and interpersonal skills.

Study Abroad

See Jerusalem Center for Near Eastern Studies and Kennedy Center for International Studies, David M.

Swedish

See Germanic and Slavic Languages.

Technology Education and Construction Management

Garth A. Hill, Chair (230 SNLB)

Professors

Grover, Jerry D. (1968) BS, MEd, Utah State U., 1956, 1961; EdD, Brigham Young U., 1968.

Nish, Dale L. (1967) BS, MS, Brigham Young U., 1957, 1958; EdD, Washington State U., 1967.

Associate Professors

Gheen, W. Lloyd (1978) BS, Brigham Young U., 1963; MEd, EdD, Texas A&M U., 1969, 1970.

Gonzales, Ronald F. (1977) BA, MA, California State U., Los Angeles, 1972, 1975; PhD, Purdue U., 1982.

Hill, Garth A. (1972) BS, MS, Brigham Young U., 1959, 1969; PhD, Colorado State U., 1979.

Martin, Loren (1982) BS, Brigham Young U., 1965; MS, Stout State U., 1966; EdD, Utah State U., 1973.

Newitt, Jay S. (1976) BS, MIE, Brigham Young U., 1969, 1972; PhD, Colorado State U., 1980.

Rogers, Leon R. (1981) BS, Utah State U., 1978; BS, Weber State Coll., 1978; MS, Colorado State U., 1982; PhD, Texas A&M U., 1989.

Assistant Professors

Christensen, Kip W. (1988) BS, MS, Brigham Young U., 1980, 1982.

Weidman, Brent H. (1988) BS, Utah State U., 1969; ME, Texas A&M U., 1970.

Instructors

Christofferson, Jay P. (1992) BS, MS, Brigham Young U., 1980, 1992.

Hutchings, D. Mark (1992) BA, Brigham Young U., 1977; MS, U. of Denver, 1992.

Emeriti

Hinckley, Edwin C. (1963) BS, MS, Oregon State U., 1950, 1956; EdD, Colorado State Coll., 1963.

Jenkins, Ronda H. (1949) BS, MA, Brigham Young U., 1955, 1966.

McArthur, Ross J. (1956) AS, Dixie Coll., 1943; BS, MS, Utah State U., 1949, 1953; EdD, U. of Missouri, Columbia, 1955.

McKell, William E. (1970) BS, Utah State U., 1948; MEd, Texas A&M U., 1951; EdD, Utah State U., 1970.

McKinnon, Max E. (1957) BS, MS, Utah State U., 1949, 1954.

Programs and Degrees

BS	Construction Management (Program 1)
BS	Technology Teacher Education (Program 2)
BS	Industrial Education (Program 3)
BS	Physical Plant Administration (Program 4)
MS	Technology Education (Nonthesis) (Program 5)
MS	Technology Education (Thesis) (Program 6)

Technology education is a general program that will prepare students for a teaching credential or related positions with industry in the areas of management or production.

Students are encouraged to seek early advisement from the department concerning the major program. Take courses in this major concurrently with the General Education requirements to provide a smooth functioning of the program. Those beginning professional preparation in the junior or senior year may find it necessary to devote additional time for completion of the program, since they usually will not have taken the technical laboratory courses in the depth areas of the curriculum.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

General Education Requirements

General Education and university requirements (including religion) are in addition to the course requirements shown in the typical program. Obtain a complete integrated course program from the department office.

Program 1

BS Construction Management

Preparation for Management Positions in Construction

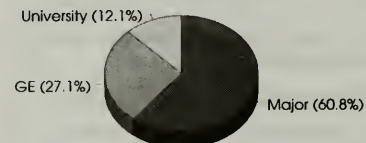
This program provides instruction leading to the baccalaureate degree. It is designed to give students comprehensive ability in construction management by providing a broad background in construction technology, business, architecture, and engineering, with specific emphasis on management within the construction industry. Graduates fill middle management positions such as superintendents, estimators, schedulers, field engineers, inspectors, general contractors, sales representatives, and construction insurance or bonding personnel. The construction industry of today is in need of competent personnel who have professional training and background in managing men, money, materials, and equipment to construct

quality buildings on time and within budget.

I. High school preparation: Recommended high school courses include drafting, algebra, trigonometry, calculus, physics, and carpentry, along with the other courses necessary for admittance to BYU.

II. Required courses: TecE 270, 291R, 391R, CM 155, 199R, 210, 211, 217, 218, 241, 305, 311, 345, 385, 408, 411, 412, 415, 417, 426, 445, 491R, Des 102, Geol 330, BusM 340, Math 112, Phscs 105, CivE 103, 113, 302, Acc 200, 341, EngI 316 or MCom 320, Econ 110, BusM 300, OrgB 320, Comms 150, Stat 221, plus General Education requirements.

Summary of Degree Requirements for BS Construction Management



1. Total hours	136.5
2. Major hours*	83.0
3. General Education requirements	37.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	4.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.5
16 hours per semester	8.5
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

*Note: Hours do not include any course that could be used to fill GE or university requirements.

Prearchitecture Program

Brigham Young University does not have an architecture program, but construction management provides an excellent preparatory program for architecture. Consult with department faculty concerning a prearchitecture program.

Construction Management (CM)

Undergraduate Courses

155. Residential Drafting and Planning. (3:2:4) F, W

Development of residential plans; floor, foundation, plot, elevations, sections, and details. Introduction to architectural CAD. Fee.

199R. Cooperative Education. (1–3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

210. Framing Methods. (3:2:4) F, W

Conversion of a framing plan to an actual building. Residential plan reading, estimating materials and manpower, framing schedule, and quality assurance. Fee.

211. Finishing Methods in Construction. (2:2:2) F, W

Managing carpentry finish work; application of interior and exterior trim. Recognizing, specifying, and requiring quality workmanship. Fee.

217. Concrete and Masonry Methods. (2:1:3) F, W

Quality concrete and masonry, including admixtures and proper techniques of placing, curing, and testing concrete. Brick and concrete block construction. Fee.

218. Plumbing Systems. (2:2:2) F, W

Basic plumbing materials, installation, applications; understanding and effectively managing the plumbing trade. Fee.

241. Electrical Systems in Construction. (2:2:2) F, W

Electrical circuits in the construction industry. Fee.

305. Construction Documents. (3:2:3) F, W Prerequisite: CM 155, 210.

How and why specific types of contract documents and specifications are compiled for a project; reading and interpreting complex construction documents. Fee.

311. Quantity Takeoffs. (2:1.5:1.5) F, W Prerequisite: CM 211, 217, 305, TecE 270.

Estimating plans and specifications to determine material quantities, labor, overhead, and profit on residential and commercial structures.

345. Construction Safety. (2:2:0) F

Safety requirements and responsibilities on the construction site; determining costs and impact of construction accidents; developing a construction site safety program.

385. Construction Contracts and Law. (2:2:0) F Prerequisite: Acc 341.

Construction contracts and law. Contractual obligations defined, including agency, contract interpretation, performance, termination, judicial remedy, and arbitration.

408. HVAC Principles and Energy Efficiency. (3:3:0) W Prerequisite: CM 210.

Heat loss and gain calculations, payback analysis, energy-efficient construction techniques, solar-assisted heating systems and HVAC principles. Fee.

411. Estimating and Bidding. (2:1.5:1.5) F, W Prerequisite: CM 311 or instructor's consent.

Competitive bidding strategies and bid analysis in construction. Computerized estimating systems. Fee.

412. Construction Scheduling and Cost Control. (3:2:3) F, W Prerequisite: CM 311 or instructor's consent.

Planning, scheduling, and monitoring construction projects, including development of critical path networks (CPM and PERT), Gantt bar charts, construction cost control, and reporting practices. Fee.

415. Construction Project Management and Control. (3:3:0) F Prerequisite: CM 412 or concurrent registration.

Managing and controlling construction projects. Planning, startup procedures, inspections, progress measurements, field reports, change order and submittal processing, equipment management and project closeout.

417. Construction Building Codes and Inspection. (2:2:0) F Prerequisite: CM 311 or instructor's consent.

Regulations placed on construction and use of buildings due to building codes and zoning ordinances. Inspection procedures used to enforce such codes.

426. Real Estate Principles and Development. (4:4:0) F Prerequisite: BusM 300 and instructor's consent.

Principles of real estate investments, emphasizing mortgage instruments and development of property from raw land to residential and commercial properties. Fee.

445. Construction Company Operations and Management. (2:2:0) W Prerequisite: CM 415, BusM 300.

Organizing, controlling and directing operations of construction companies; cash flow analysis, purchasing and cost control, company planning and risk management.

491R. Senior Seminar. (0.5:1:0 ea.) F

Developing best employment opportunities and strategy; interviewing, sales negotiations, resumé and letter writing, and salary negotiations. College Lecture attendance required.

494R. Special Problems in Construction Management. (1–3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: instructor's consent. Fee.

Program 2

BS Technology Teacher Education

This program is designed to provide instruction and preparation leading to a baccalaureate degree as well as to prepare graduates as technology teachers at the middle school or junior or senior high school level. See Technology Teacher Education in the Secondary Education section of this catalog for information about this teaching major.

Program 3

BS Industrial Education

Education in technical areas is combined with business management to prepare students to be competent and ethical managers in industry.

I. General Education: As outlined by the university, with the following substitutions and additions:

- A. Mathematics (7 hours): Math 111, TecE 270, CS 103. Fulfills the Foreign Language or Mathematics requirement.
- B. Physical Sciences (6 hours): Phscs 105, Chem 101. Can be used as Natural Sciences elective.
- C. Social and Behavioral Sciences (6 hours): EngT 200, Econ 110. Can be used as Social and Behavioral Sciences electives.

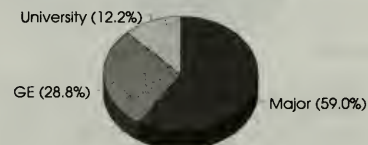
II. Career courses (4 hours): TecE 291R (required each semester for freshmen and sophomores), 391R (required each semester for juniors and seniors), StDev 317 (recommended for last semester).

III. Management courses (24 hours): Acc 200, BusM 300, 340, TecE 455, OrgB 327, and 9 hours from Acc 341, BusM 381R, OrgB 320 or 321, Comms 101, 230, 307, ManEc 300, 301, Stat 221.

IV. Technical courses (40 hours): TecE 150, 250, 251, 354, 450, 453, 490R, Des 115, 171, 241, and 11 hours from TecE 120, 199R, 209, 490R, Des 116, 119, 240, MeEn 170, 171, Geog 412.

V. Electives: 7 hours

Summary of Degree Requirements for BS Industrial Education



1. Total hours	135.5
2. Major hours	80.0
3. General Education requirements Core	39.0
	15.0

First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.5
16 hours per semester	8.5
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

★Note: Hours do not include any course that could be used to fill GE or university requirements.

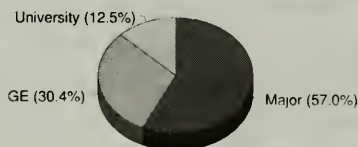
Program 4

BS Physical Plant Administration

This program prepares students to be part of the administrative/supervisory team in the increasingly complex world of facilities management. Employment is with colleges and universities, hospitals and health care centers, governmental agencies, recreational complexes, airports, and large industrial plants. Responsibilities would include supervision of planning, construction, and maintenance of the building and grounds, space utilization, strategic planning, etc. Increasing attention to employee health and safety, environmental concerns, conservation of resources, and highly technological systems have made the physical plant administrator an increasingly important member of the management team.

Required courses: Math 110, Stat 222, Phscs 100, Chem 101, CM 155, 305, 311, 385, 408, 412, 494R, TecE 199R, 270, 291R, 391R, Hlth 415, Acc 200, 341, OrgB 320, 327, 347, BusM 300, 340, Econ 110, AgHrt 103, Comms 150, Hlth 425, 426, StDev 317.

Summary of Degree Requirements for BS Physical Plant Administration



1. Total hours	131.5
2. Major hours★	75.0
3. General Education requirements	40.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0

4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

★Note: Hours do not include any course that could be used to fill GE or university requirements.

Technology Education (TecE)

Undergraduate Courses

120. Manufacturing and Construction Systems. (3:2:4) F

Materials, methods, and management aspects of modern American manufacturing systems; conversion of raw or recycled materials into industrial and consumer goods. Fee.

140. Power/Energy Systems. (2:2:4) W

Energy systems including history, measurement, utilization, conversion, transmission and storage, and applications to industry. Fee.

149. General Automotive. (3:2:4) F, W, Sp, Su

Directed study toward automotive maintenance, service, and minor repair. Fee.

150. Communication Systems. (3:2:4) F

Overview of print communications industries of drafting and graphic arts and transfer of information to extend human potential. Fee.

160. Recreational Handicrafts. (2:1:3) F, W

Design and construction of contemporary craft projects in wood, metal, plastics, and leather. For the hobbyist, teacher, or recreational specialist. Fee.

199R. Cooperative Education. (1-3:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: consent of both department chair and cooperative education coordinator.

Work experience evaluated by supervisor and posted on student's transcript.

200. Woodwork Fundamentals. (3:2:4) F, W, Sp, Su

Care and use of hand and machine woodworking tools applied to fundamental principles of sawing, joining, fitting, and fastening. Fee.

205. Finishing Technology. (2:1:3) F, W

Preparation, selection, and application of finishing materials and analysis of coating problems. Fee.

209. Basic Electricity. (3:2:4) F, W

Independent Study also.

Theory of electricity and electronics; magnetism, DC/AC circuits, semiconductors, and introduction to digital processes for automated systems. Technical reports of lab activities. Fee.

229. Metalwork Fundamentals. (3:2:4) W

Metalworking processes, including basic metal forming, cutting, and welding. Fee.

230. Introduction to Manufacturing Processes. (3:2:4) F, W

Operation and setup of machine shop equipment and tools, emphasizing machine lathe and milling machines.

239. Sheet Metal and Ornamental Iron. (2:1:3) W

Processes in sheet metal, ornamental iron work, and pattern layout. Fee.

240. Introductory Plastics. (3:2:4) F

Overview of the plastics industry, ecological concern, physical properties of plastic materials, basic polymer chemistry. Lab experiences with molding practices. Fee.

250. Graphic Arts. (3:2:4) F, W, Sp

Processes and procedures of graphic arts, with an overview of the printing and publishing industries. Fee.

251. Photo-Offset Lithography. (3:2:4)

Prerequisite: TecE 250.

Processes and procedures of printing by photo-offset lithography. Fee.

260. Advanced Crafts. (3:2:4) F, W

Project emphasizing design and craftsmanship. Major areas include woodturning, carving, and sculpture, with options in leather, plastics, clay, and other materials. Fee.

270. Computer Applications for Industrial Education. (3:3:0) F, W, Sp, Su

Introduction to computer applications and programming for education and industrial management; word processing, electronic spread sheets, database management, and limited BASIC programming. Fee.

281. Introduction to Automobile Tune-Up. (3:2:4) F

Introduction to technical systems used in automotive engines to include sensors and digital processing of automated systems. Diagnosis to include use of instrumentation. Fee.

291R. Undergraduate Seminar. (0:1:0 ea.) F, W

Required each semester for undergraduate majors not enrolled in TecE 391R or 491R. College Lecture attendance required. Separate program sections.

300. Advanced Wood Projects. (3:2:4) F

Prerequisite: TecE 200.

Application of industrial wood processes. Processing green wood, wood turning, veneering, laminating, small wood originals. Fee.

301. Cabinetmaking and Millworking. (3:1:5) W Prerequisite: TecE 200.

Selection, design, and construction of modular and custom cabinets. Fee.

315. The World of Construction. (2:1:3) F, W

Developing skills and knowledge necessary to teach basic concepts and skills of the construction industry. Fee.

319. Upholstery. (2:1:3) F, W

Experience with typical upholstery systems. Fee.

325. The World of Manufacturing. (2:1:3) W

Developing skills and knowledge necessary to teach basic concepts and skills of manufacturing industries. Fee.

329. Advanced Metal Machining. (3:2:4) W

Prerequisite: TecE 130.

Development of operational skills and precision with machining equipment. Introduction to NC and EDM equipment. Fee.

340. Principles of Technology. (3:2:4) F

Prerequisite: TecE 140, Phscs 105.

Activities and experiments in advanced applications and utilization of energy; applications of scientific and mathematic concepts.

354. Screen, Flexography, and Gravure Printing. (3:2:4) W Prerequisite: TecE 250.

Processes and procedures of printing by screen flexography and gravure printing. Fee.

360. Art Metal Crafts. (3:2:4) F, W

Design and development of craft projects using metal and ceramics. Operation includes spinning, casting, shaping, and etching. Fee.

365. Jewelry and Lapidary. (2:1:3) F, W

Lost wax casting, sheet silver fabrication; stone cutting and polishing. Fee.

386. Automotive Engines. (3:2:4) F, W, Sp

Care and maintenance, including overhaul and rebuilding procedures. Fee.

387. Steering and Braking Mechanisms. (3:2:4) F

Theory and application of the principles of alignment, brakes, steering, and suspension systems on the modern automobile. Fee.

388. Power Transmission. (3:2:4) W

Theory and application of the principles of standard transmissions, differentials, and automatic transmissions (light duty). Fee.

391R. Seminar. (0.5:1:0 ea.) F, W

Required three semesters at junior and senior level. Department seminar and College Lecture attendance required. Separate program sections.

400. Advanced Furniture Construction. (3:2:4) W Prerequisite: TecE 200.

Advanced woodwork and operations in furniture construction. Drawings, specifications, and cost estimates required for all projects. Fee.

405. Shop Maintenance. (1:1:3) F

Care and maintenance of tools and machines. Fee.

440. Industrial Plastics. (3:2:4) W

Prerequisite: TecE 240.

Testing and analyzing plastic materials and selected processes, industrial bonding practices, observing industrial plastic activities, and solving approved student-selected problems. Fee.

450. Electronic Publishing. (3:2:3) F

Typography, design, layout, typesetting, paste-up, and desktop publishing for print communications. Fee.

453. Graphic Arts Photography. (3:2:3) W

Photographic theory and applications used in the printing industry; including line, halftone, and color separation. Fee.

455. Printing Estimating. (3:3:0) W

Prerequisite: TecE 270.

Cost estimating and scheduling of printing production using price catalogs, budgeted hourly wage systems, and computer estimating. Fee.

470. Shop Organization and Management. (2:2:4) W Prerequisite: ScEd 476R.

Organizational management of industrial education labs, including unit, general, and multiple activity types.

477. Instructional Materials for Industrial Education. (3:2:4) W Prerequisite: ScEd 476R.

Developing instructional packages including teaching aids, career modules, projects, exercises correlated with practical teaching experiences. Designed to span all educational levels. Fee.

489. Power Tune-up. (2:1:4) W Prerequisite: TecE 389.

Theory and application of balancing the ignition and fuel systems to decrease emissions and improve performance of automotive engines using a chassis dynamometer. Fee.

490R. Special Problems in Industrial Education. (1–3:Arr.:Arr. ea.) F, W, Sp, Su

Prerequisite: topics must be approved by program supervisor.

Individual study in special areas of interest (3-hour maximum for any one area). Fee.

491R. Senior Seminar. (0.5:1:0 ea.) W

Developing leadership training skills and professional growth and development. Required of seniors. College Lecture attendance required.

Advanced Undergraduate or Graduate Courses

505. Technology for the Elementary School. (2:2:0) Sp, Su

Basic concepts and activities needed to prepare elementary students to cope with their technological society. Fee.

535. Industrial / Vocational Safety Program Development. (2:2:0) F, Sp, Su

Identifying and implementing programs for safety and facilities management that comply with state and national legislation. Fee.

593R. Workshop in Industrial Technology Education. (1–3:Arr.:Arr. ea.) F, W, Sp, Su

Reviewing and participating in current industrial and technological advances. Limited to 3 credit hours maximum. Fee.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

610. History and Legislation of Vocational and Technology Programs. (2:2:0)**615. Philosophical Basis of Technological Programs.** (2:2:0)**625. Instructional Management for Vocational and Technology Courses.** (2:2:0)**630. Adult Vocational and Technology Programs.** (2:2:0)**635. Facility Design for Vocational and Technology Programs.** (2:2:0)**640. Coordination and Supervision of Vocational and Technology Programs.** (2:2:0)**645. Visual and Graphic Presentations in Vocational and Technology Programs.** (2:1:2)**690R. Seminar.** (1:1:0 ea.)**694R. Readings and Conference.** (1–3:0:0 ea.)**695R. Advanced Technological Processes.** (1–3:0:0 ea.)**698R. Master's Project.** (1–3:Arr.:Arr. ea.)**699R. Master's Thesis.** (1–6:Arr.:Arr. ea.)

Theatre and Film

Harold R. Oaks, Chair (D-581 HFAC)

Professors

Bentley, Marion J. (1971) BS, U. of Utah, 1950; MA, Stanford U., 1958; PhD, U. of Utah, 1968.

Fielding, Eric (1992) BA, Brigham Young U., 1974; MFA, Goodman School of Drama, Art Institute of Chicago, 1976.

Metten, Charles L. (1962) BA, MA, U. of California, Los Angeles, 1951, 1952; PhD, U. of Iowa, 1960.

Oaks, Harold R. (1970) BA, MA, Brigham Young U., 1960, 1962; PhD, U. of Minnesota, Minneapolis, 1964.

Pope, Karl T. (1966) BA, MA, Brigham Young U., 1962, 1964; PhD, Wayne State U., 1966.

Whitman, Charles W. (1965) BA, MA, Brigham Young U., 1957, 1958; PhD, U. of Minnesota, Minneapolis, 1967.

Associate Professors

- D'Arc, James V. (1979) BA, PhD, Brigham Young U., 1978, 1986.
 Jenkins, Jean R. (1967) BA, MA, Brigham Young U., 1947, 1966.
 Nelson, George D. (1990) BA, Brigham Young U., 1977; MFA, U. of Washington, 1979.
 Nelson, Robert A. (1979) BA, U. of Arizona, 1970; PhD, U. of Utah, 1976.
 Scanlon, Rory R. (1984) BA, Brigham Young U., 1980; MFA, U. of Illinois, 1984.

Assistant Professors

- Crosland, Ivan A. (1971) BS, MA, Brigham Young U., 1961, 1965.
 Heiner, Barta (1988) BA, Brigham Young U., 1971; MFA, American Conservatory Theatre, 1977.
 Morgan, David (1991) BA, Brigham Young U., 1985; MFA, National Theatre Conservatory, 1990.
 Samuelsen, Eric (1992) BA, Brigham Young U., 1983; PhD, Indiana U., 1991.
 Scheerer, David (1989) BA, Eastern Washington U., 1983; MFA, Brigham Young U., 1986.
 Swenson, Janet L. (1974) BA, MA, Brigham Young U., 1969, 1974; MFA, U. of Utah, 1992.
 Swenson, Sharon L. (1987) BA, MA, U. of Utah, 1968, 1974.
 Walker, Oscar Lee (1969) BS, MIE, Brigham Young U., 1968, 1975.

Instructors

- Duncan, Dean W. (1992) BFA, Brigham Young U., 1987; MA, U. of California, Los Angeles, 1991.
 Slover, Tim (1989) BA, Brigham Young U., 1980; MA, U. of Michigan, 1981.

Emeriti

- Clinger, Morris M. (1936) BA, MA, Brigham Young U., 1932, 1946; PhD, U. of Minnesota, Minneapolis, 1963.
 Danielewski, Tad Z. (1975) BFA, Ohio U., 1950.
 Gledhill, Preston R. (1947) BA, Brigham Young U., 1939; Louisiana State U., New Orleans, 1940; PhD, U. of Wisconsin, Madison, 1951.
 Golightly, Max C. (1957) BA, MA, Brigham Young U., 1950, 1959.
 Henson, Charles A. (1958) BS, MS, EdD, Brigham Young U., 1957, 1959, 1980.
 Morley, Alonzo J. (1928) BA, MA, Brigham Young U., 1925, 1931; PhD, U. of Iowa, 1935.
 Woodbury, Lael J. (1965) BS, Utah State U., 1952; MA, Brigham Young U., 1953; PhD, U. of Illinois, 1954.

Programs and Degrees

BA	Theatre Arts
Emphasis:	
	Acting
BA	Theatre Arts Education
BA	Film
BFA	Film
BFA	Music Dance Theatre

MA	Theatre and Film
MFA	Theatre Design and Technology
PhD	Theatre and Film

Our objective is to foster disciplined scholars and artists, committed to the gospel of Jesus Christ, who so excel in their personal conduct and professional skill that they are sought as models of leadership, inspiration, and achievement. We provide comprehensive programs designed to produce graduates and products that delight, edify, and enlarge the human spirit.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

Core Requirements for All BA Degree Programs in Theatre

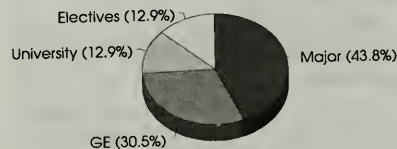
- I. ThF 116, 117, 121, 123, 127R, 140, 141, 143R, 200, 201, 220. (All courses are to be completed before junior year.)
- II. No D credit in theatre and film can be applied toward degree.

BA Theatre Arts

This liberal arts degree prepares students for basic work in the field and provides excellent preprofessional preparation for graduate work in child drama, acting, directing, playwriting, theatre design and technology, and theatre history, theory, and criticism.

- I. Required in addition to above theatre core: ThF 361, 461.
- II. Electives: 31 hours to be selected from other theatre and film courses. Although granted a general degree in theatre, students may emphasize selected areas in their last two years of undergraduate work (approved course list available in the advisement center).

Summary of Degree Requirements for BA Theatre Arts



1. Total hours	128.0
2. Major hours	56.0
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5

Religion	14.0
PE/Health	2.5
5. Elective hours	16.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

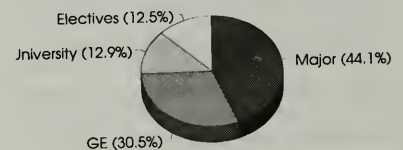
*Note: Hours do not include any course that could be used to fill GE or university requirements.

BA Theatre Arts: Acting Emphasis

This liberal arts degree was developed for students who are strongly considering acting as a career. It is focused to better prepare them to compete with other candidates for professional acting schools or graduate work.

- I. Preliminary audition for those considering the program during second semester of first year. Final acceptance audition during second semester of second year. Prerequisite: ThF 121, 123.
- II. Proficiencies: All students will be required to complete an audition proficiency at the end of each semester for advising purposes on areas of strength and of weakness and ways to correct them.
- III. In addition to BA theatre arts core requirements: ThF 122, 124R, 322, 323R, 324R, 333, 361, 423R, 424R, 522R, 524R; Dance 125 or 130; 134R, 240R; PE 126; Music 111.
- IV. Electives: 5 hours from ThF 325R, 523R, 540R, 552R, or 579R.

Summary of Degree Requirements for BA Theatre Arts: Acting Emphasis



1. Total hours	128.0
2. Major hours	56.5
3. General Education requirements	39.0
Core	15.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	6.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	16.0
6. 40 hours upper-division GPA requirement of 2.0	

7. Estimated semesters to graduate
13 hours per semester 10.0
16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BA Theatre Arts Education

This professional degree prepares students to teach theatre in secondary schools. See Theatre and Film in the Secondary Education section of this catalog for program requirements.

BA Film

Students in this liberal arts degree program prepare for work in film theory, history, criticism, and aesthetics, with limited experience in production techniques. The BA core below is mandatory for students wishing to enter the BFA Program.

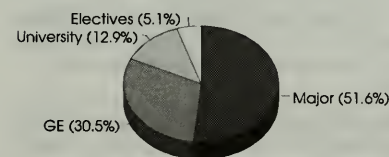
- I. Film core: ThF 117, 123, 202, 203, 280, 281, 282, 283, 284, 285, 287R (2 hours), 385, 481, 487R, 489R, 587R.

- II. Electives: 33 credit hours from mix of theory, history, and criticism courses approved in writing by film program coordinator.

At least 24 of 33 hours must be upper division. Within this area student should select supporting area (21 hours) demonstrating a coherent block as follows:

- A. Students planning to pursue a graduate degree will use this block to strengthen supporting area either by further work in area or by coherent course work in related fields.
- B. Students wishing to combine a film major with preparation for professional schools that may require quantitative skills use this block for supporting course work.

Summary of Degree Requirements for BA Film



1. Total hours 128.0
2. Major hours ♦ 66.0
3. General Education requirements 39.0
- Core 15.0
- First-Year Writing 3.0
- Arts and Sciences electives 12.0
- Advanced Math/Foreign Language 6.0
- Advanced Writing 3.0
4. University requirements 16.5

- Religion 14.0
- PE/Health 2.5
5. Elective hours 6.5
6. 40 hours upper-division
- GPA requirement of 2.0
7. Estimated semesters to graduate
- 13 hours per semester 10.0
- 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BFA Film

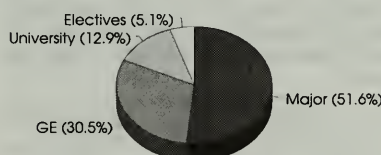
The BFA in film is a specialized undergraduate degree with an emphasis in film production and screen writing.

- I. Application for admission required.

- II. In addition to preceding film core requirements: ThF 380, 447R, 480, 484, 485, 486R, 490, 499R.

- III. Electives: 13 hours from ThF 295, 327R, 361, 378R, 424R, 447R, 461, 526, 581R, 585R, 595R, 687R, 689R, Comms 272, 346, 350, 355, Fren 217, Phil 214.

Summary of Degree Requirements for BFA Film



1. Total hours 128.0
2. Major hours ♦ 66.0
3. General Education requirements 39.0
- Core 15.0
- First-Year Writing 3.0
- Arts and Sciences electives 12.0
- Advanced Math/Foreign Language 6.0
- Advanced Writing 3.0
4. University requirements 16.5
- Religion 14.0
- PE/Health 2.5
5. Elective hours 6.5
6. 40 hours upper-division
- GPA requirement of 2.0
7. Estimated semesters to graduate
- 13 hours per semester 10.0
- 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BFA Music Dance Theatre

The BFA in music dance theatre is an interdisciplinary degree offered by the College of Fine Arts and Communications through the cooperative involvement of its Department of Music and Department of Theatre and Film and the College of Physical Education's Department of Dance.

- I. Application and audition for acceptance into program during first semester of registration.

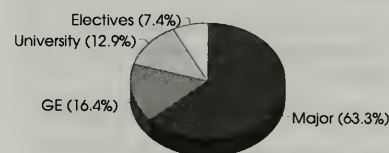
- II. Music 113, 161, 186, 260R (6 hours), 261, 290, 360R (6 hours), 361.

- III. Dance 131, 134R, 135, 231, 235, 240R, 242, 290, 291R, 340R, 361, 362, 363, 390R.

- IV. ThF 121, 122, 123, 124R, 127R, 323R, 361, 522R; one course from 324R, 423R, 424R, 523R, or 524R.

- V. MDT Seminar (Music 228, Dance 228, ThF 228), History of Music Dance Theatre (Music 300, Dance 300, ThF 300), and MDT Senior Performance Project (Music 426R, Dance 426R, ThF 426R). Required involvement in Music 319R, Dance 229R/429R, ThF 240R/540R (3 hours) and ThF 399R, Music 399R, or Dance 399R (1 hour).

Summary of Degree Requirements for BFA Music Dance Theatre



1. Total hours 128.0
2. Major hours ♦ 81.0
3. General Education requirements 21.0
- Core 15.0
- First-Year Writing 3.0
- Arts and Sciences electives 0.0
- Advanced Math/Foreign Language 0.0
- Advanced Writing 3.0
4. University requirements 16.5
- Religion 14.0
- PE/Health 2.5
5. Elective hours 9.5
6. 40 hours upper-division
- GPA requirement of 2.0
7. Estimated semesters to graduate
- 13 hours per semester 10.0
- 16 hours per semester 8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Theatre Arts Education Minor

See Theatre and Film in the Secondary Education section of this catalog for program requirements.

Film Minor

Complete the following: ThF 117, 199R (1 hour), 202 or 203, 280, 285, 385. Select two of 281, 282, 283, 284. *Total minor hours: 17.*

Liberal Arts Theatre Minor

This minor is intended for students from other departments who have an interest in theatre and desire to have a designed program and official designation for having completed it. It provides a broad view of theatre that includes analysis, acting, and technical production.

Complete the following: ThF 116, 121, 123, 127, 140, 141, 143, 200 or 201, 361. *Total minor hours: 17.*

Theatre and Film (ThF)

Undergraduate Courses

115. Introduction to the Theatre. (3:3:1)
Independent Study also.

Appreciation of theatre through lectures, viewing productions, reading, writing, demonstrations, and productions. Lab required.

116. Dramatic Structure and Analysis. (2:2:1)
Play analysis and dramatic theory. Lab required.

117. Introduction to Film Art and Analysis. (3:5:1)
Analytical skills for understanding and appreciating film art; basic history, theory, and aesthetics. Lab required.

121. Voice and Diction 1. (2:3:1)
Skills involved in producing an effective voice; International Phonetic Alphabet. Lab required.

122. Voice and Diction 2. (2:3:1) Prerequisite: ThF 121.
Continuation of ThF 121. Integration of skills leading to effective vocal performance. Lab required.

123. Acting: Basics for Stage and Screen. (2:4:1) Prerequisite: ThF 121.
Fundamental acting skills: perception, emotive analysis, thought processes. Lab required.

124R. Acting: Performance for Stage and Screen. (3:6:1 ea.) Prerequisite: ThF 121, 122, 123. May be concurrently enrolled in 122. By audition only.

Integrating acting skills; building a character through scene work.

127R. Stage and Screen Makeup 1. (2:4:1 ea.)
Basic techniques in stage and screen makeup.

140. Set Construction 1. (1:1:2)
Methods of scenery construction. Lab required.

141. Costume Construction 1. (1:1:3)
Methods of costume construction. Lab required.

142. Stage Lighting 1. (2:2:2)
Fundamental training in stage lighting. Lab required.

143R. Theatre Production 1. (1:0:4 ea.)
Prerequisite: ThF 142.
Methods of production. Lab required.

199R. Theatre/Film Internship. (1-3:Arr.:Arr. ea.)
Off-campus work experience in theatre or film; required in certain emphasis tracks.

200. History 1: Theatre. (3:3:0)
Play analysis, dramatic theory, and first half of theatre history: origins, Greek, Roman, medieval, Italian Renaissance, Spanish, Elizabethan.

201. History 2: Theatre. (3:3:0)
Second half of theatre history: Oriental, Renaissance and baroque France, England 1642-1800, eighteenth-century Europe, romanticism, realism, departures from realism, contemporary.

202. Film History 1. (3:3:0) Prerequisite: ThF 117, acceptance into film BA major.
Survey course (1895 to 1935); classic silent and sound films; emphasizes American; includes some German, Russian, Italian, and French.

203. Film History 2. (3:3:0) Prerequisite: ThF 117, 202, acceptance into film BA major.
Survey course (1935 to present); classic American, some German, Russian, Italian, and French.

220. Principles of Design for Stage and Screen. (2:4:0)
Basic theories and practices of design as related to the actor, director, writer, designer, and technician.

228. Music Dance Theatre Seminar. (1:2:4)
Prerequisite: concurrent registration in Dance 228 and Music 228. For music dance theatre BFA majors only.
Intensive integration of music, dance, and theatre for the performer.

240R. Workshop 1: Acting. (1-6:0:18 ea.)
Prerequisite: instructor's consent.
Experience in production: acting.

243R. Workshop 1: Directing. (1-6:0:18 ea.)
Prerequisite: instructor's consent.
Experience in production: directing.

261. Beginning Directing for Secondary Schools. (2:3:1) Prerequisite: ThF 123, 124.
Examining directors' works to establish personal directing philosophies.

280. Film Production 1. (3:3:0) Prerequisite: ThF 117, 199R, acceptance into film BA major.
Visual and aural language of 16-mm film production; basic vocabulary, equipment, and technical skills. Lab required.

281. Film Viewing Lab 1: American 1. (0:5:1:3)
Screening, readings, discussion of historic, contextual, technical, and aesthetic aspects of key films.

282. Film Viewing Lab 2: Foreign. (0:5:1:3)
Screening, readings, discussion of historic, contextual, technical, and aesthetic aspects of key foreign films.

283. Film Viewing Lab 3: American 2. (0:5:1:3)
Screening, readings, discussion of historic, contextual, technical, and aesthetic aspects of key films.

284. Film Viewing Lab 4: Documentaries and Shorts. (0:5:1:3)
Screening, readings, discussion of a cross section of international film.

285. Introduction to Screenwriting. (3:3:0)
Prerequisite: ThF 202, 203, acceptance into film BA major.
Overview and application of media writing; includes commercials, promotional films, instruction/training documentaries, and short features.

287R. Student Film Symposium. (0:5:0:5:0 ea.) Weekly.
Assemblies that interface industry professionals and scholars with students in lecture and question-and-answer sessions.

295R. Workshop 1: Special Projects. (1-6:0:18 ea.)
Experience in production: special projects.

299R. Cooperative Education. (1-9:0:6 ea.)
Prerequisite: instructor's consent.
Stage, film, and television writing, directing, acting, designing, and managing.

300. History of Music Dance Theatre. (1:3:0)
Prerequisite: concurrent registration in Dance 300 and Music 300.
Development of music theatre in Western tradition from classical antiquity to present, emphasizing union of music, theatre, and dance.

318R. Properties for Stage and Screen. (2:2:2 ea.) Prerequisite: ThF 140, 220, or equivalent.
Materials and techniques of properties design and construction.

319. Stage Management 1. (2:2:2)
Backstage organization, safety procedures, and operating stage machinery. Stage managers selected from this course.

320. Scenic Design 1. (3:3:0) Prerequisite: ThF 220.
Theories and practices of set design, drafting, and painting.

321. Stage Lighting 2. (2:2:2) Prerequisite: ThF 142.

Theories and practices of theatrical lighting design and sound.

322. Applied Classical Speech Technique. (2:4:0) Prerequisite: ThF 121, 122, 123, 124, and concurrent registration in 423.

Speech techniques applied in the classical play.

323R. Acting: Music Scene Study. (3:6:1 ea.) Prerequisite: ThF 124R. By audition only.

Development of acting, singing, and dancing for music theatre through scene study.

324R. Acting: Dialects. (3:6:1 ea.)

Prerequisite: ThF 124R. By audition only.

Major stage dialects and their performance in scenes.

325R. Art of Interpretation. (3:3:1 ea.)

Prerequisite: ThF 121, 122, 123, 124.

Practical experience in correct voice principles leading to performance quality.

326. Sound Design 1. (2:2:2) Prerequisite: ThF 220 or equivalent.

Basics of theatre acoustics and operational techniques: recording, editing, and reinforcing.

327R. Stage and Screen Makeup 2. (2:4:2 ea.)

Prerequisite: ThF 127R or equivalent.

Advanced techniques in makeup and prosthetics.

333. Intermediate Movement for Theatre.

(2:2:0) Prerequisite: Dance 130, 134, 240.

Use of the body as a primary tool for character and script interpretation.

340. Set Construction 2. (1:0:4) Prerequisite: ThF 140 or equivalent.

Experience in production: construction.

341. Costume Construction 2. (1:0:4)

Prerequisite: ThF 141R or equivalent and instructor's consent.

Experience in production: costume.

343R. Theatre Production 2. (1:0:4 ea.)

Prerequisite: ThF 143R or equivalent.

Methods of production.

344R. Scenic Painting. (2:2:2 ea.)

Prerequisite: ThF 220.

Experience in production: design.

361. Directing Theory. (3:2:4) Prerequisite: lower-division theatre core. For majors or minors only.

Fundamental theories of directing for film and stage. Lab required.

362. Costume Design 1. (2:2:3) Prerequisite: ThF 220, 295R, or equivalent.

Principles and aesthetics of costume design and construction.

377. Secondary Teaching Preparation. (4:4:0)

Prerequisite: instructor's consent.

Developing methods and materials for curriculum and production.

378R. Playwriting. (3:4:0 ea.) Independent Study also.

Theory and technique of writing the one-act and full-length play.

380. Film Production 2. (3:3:1) Prerequisite: ThF 280 and acceptance into film BFA major.

Intermediate 16-mm film production techniques; introduction of synchronous sound and short narrative techniques. Lab required.

385. Film Ethics and Criticism. (3:3:0)

Prerequisite: ThF 202, 203, 280, and acceptance into film BA or BFA major.

Ethical aspects and moral order of filmmaking/viewing.

399R. Cooperative Education. (1–9:0:6 ea.)

Prerequisite: instructor's consent.

Stage, film, and television writing, directing, acting, designing, and managing.

423R. Acting: Classics. (3:6:1 ea.)

Prerequisite: ThF 124R. By audition only.

Acting problems peculiar to classical literature, emphasizing Shakespearean scansion and text analysis.

424R. Acting: Cinema and TV Techniques.

(2:3:Arr. ea.) Prerequisite: ThF 123. By audition only.

On-camera techniques. Lab required.

426R. Music Dance Theatre: Senior

Performance Project. (1:0:5 ea.) Prerequisite:

ThF 361; concurrent registration in Music 426R and Dance 426R and consent of MDT advisory committee.

Final senior performance project integrating music, dance, and theatre in performance.

447R. Film Crew. (1–3:0:3–9 ea.) Prerequisite:

ThF 280, 490, acceptance into film BA or BFA major, and instructor's consent.

Practical supervised experience in film production. Exposure to organization, protocol, and technical aspects.

461. Directing Practice. (3:2:4) Prerequisite:

lower-division theatre core and ThF 361.

Directing projects. Lab required.

462. Costume Design 2: Graphics. (2:4:0)

Prerequisite: instructor's consent.

Graphic skills for costume renderings.

472R. Puppetry. (3:4:0 ea.)

Theories, techniques, and experience constructing and operating puppets for use in performance, recreational, and educational settings.

480. Film Production 3. (5:4:0) Prerequisite:

ThF 380, 485, 490, and acceptance into film BFA major.

Advanced 16-mm film production; writing, management, technical, and theoretical skills.

481. Documentary Filmmaking. (3:3:0)

Prerequisite: ThF 202, 203, 280, and acceptance into film BA major.

Theory and techniques from classic documentary to *cinema verité*; includes development and production.

484. Writers/Directors Workshop. (3:0:9)

Prerequisite: ThF 380, 485, and acceptance into film BFA major.

Experience videotaping, directing, editing, and revising scenes from advanced student scripts.

485. Screenwriting 2. (3:3:0) Prerequisite:

ThF 285 and acceptance into film BFA major.

Fundamentals of dramatic theory, introduction to specialized structures and script formatting, and practical screenwriting assignments.

486R. Producer's Practicum. (1–3:3:3 ea.)

Prerequisite: ThF 480, 485, 490, and acceptance into film BFA major.

Practical issues of collaboration, integrity, and decision making with overview of producer's role in finding, developing, funding, and marketing motion pictures in domestic and foreign theatrical and television venues.

487R. Motion Picture as a Mirror of Our

Times. (3:2:3 ea.) Prerequisite: ThF 202, 203, and acceptance into film BA or BFA major.

Interdisciplinary approach to films as works of art and as historical documents expressing a people, place, and time.

489R. Theory and Criticism of Film Art.

(3:2:3 ea.) Prerequisite: ThF 202, 203, and acceptance into film BA or BFA major.

Various approaches to contemporary critical discourse.

490. Film Production Management. (3:3:0)

Prerequisite: ThF 280, 285, and acceptance into film BA or BFA major.

Overall view of how motion picture production is organized.

499R. Professional Internship. (1–9:0:6 ea.)

Prerequisite: ThF 280, 490, acceptance into film BA or BFA major, and instructor's consent.

Experience with a motion picture production company.

Advanced Undergraduate or Graduate Courses

516R. Theatre and Film Instruction.

(1–3:Arr:Arr. ea.) Prerequisite: instructor's consent.

Master class for developing teaching methods and techniques.

519R. Stage Management 2. (1–3:0:9 ea.)

Prerequisite: ThF 319 or equivalent.

Advanced principles, techniques, and practice. Production stage managers chosen from this course.

520. Scenic Design 2. (3:3:0) Prerequisite: ThF 140, 220, or instructor's consent.

Intermediate theory and practice of scenic design for the stage.

522R. Auditions and the Business. (3:6:0 ea.) Prerequisite: ThF 124R, 323R, 324R.

Auditions, cold reading, resumés, and the business end of acting, music, and dance for the professional performer.

523R. Acting: Recital. (2:6:0 ea.) Prerequisite: ThF 124R, 323R, 324R.

Twenty-five- to thirty-minute performance of cuttings from varied genres.

524R. Acting: Advanced Performance. (3:1:8 ea.) Prerequisite: ThF 124R, 323R, 324R.

Performance option: performance and written analysis of approved role in a major production. Teaching option: assistance in acting classes and a weekly seminar.

526. Sound Design 2. (2:2:2) Prerequisite: ThF 220, 326, or equivalent.

Theory, practice, and methodology of studio sound recording, reinforcement, and mixing.

527. Storytelling. (2:2:1)

Theory, technique, and practice.

540R. Workshop 2: Acting. (1–6:0:18 ea.)

Prerequisite: instructor's consent.

Advanced experience in production: acting.

541. Set Construction 3. (3:3:3)

Advanced experience in production: construction.

542R. Theatre Production 3. (1–3:0:9 ea.)

Prerequisite: ThF 143R, 343, or equivalent.

Advanced experience in production: technical crew.

543R. Workshop 2: Directing. (1–6:0:18 ea.)

Prerequisite: instructor's consent.

Advanced experience in production: directing.

544R. Workshop: Design. (1–6:0:18 ea.)

Prerequisite: instructor's consent.

Advanced experience in production: design.

545R. Costume Construction 3. (1–6:0:18 ea.)

Prerequisite: ThF 543R, 544R, or instructor's consent.

Special construction: armor, masks, etc.

552R. Creative Dramatics and Improvisation. (3:3:2 ea.)

Informal or improvised dramatic techniques with children, adolescents, and/or adults.

562. Costume Design 3. (3:3:3) Prerequisite: ThF 220, 362, 462, 544R, 595R, or instructor's consent.

Advanced theory and practice in costume design for stage and screen.

572R. Theatre for Children. (2:3:1 ea.)

Theories, techniques, and experience in creating formal drama for the child and youth audience.

578R. Advanced Playwriting. (2–6:4:0 ea.)

Prerequisite: ThF 378R.

Seminar in playwriting.

579R. Playwright's, Director's, Actor's Workshop. (4:4:1 ea.) Prerequisite: by audition only.

Group approach to nurturing new work through script study, improvisation, and staged readings.

581. Art Direction. (3:2:3) Prerequisite: ThF 280 or equivalent and instructor's consent.

Fundamentals of motion picture/television art direction and design.

584. Film Sound. (3:2:1) Prerequisite: ThF 480R or equivalent and instructor's consent.

Motion picture sound recording and theory.

585. Screenwriting 3. (3:3:0) Prerequisite: ThF 380, 485, or equivalent, and acceptance into film BFA major.

Theory and technique of writing feature-length dramatic screenplays.

587R. Film Genres. (3:2:3 ea.) Prerequisite: ThF 202, 203, 489R, and acceptance into film BA or BFA major.

Intensive study of major film genres: western, musical, or horror.

595R. Workshop 2: Special Projects.

(1–6:0:18 ea.)

Advanced experience in production: special projects.

599R. Cooperative Education. (1–9:0:6 ea.)

Prerequisite: instructor's consent.

Off-campus experience in stage, film, or television writing, directing, acting, designing, or managing.

Graduate Degree Courses

See also the 1993–94 BYU Graduate Studies Catalog.

600. Advanced History 1: Theatre. (3:3:0)

601. Advanced History 2: Theatre. (3:3:0)

644. Advanced Scenic Design. (3:3:3)

660R. Advanced Voice and Interpretation. (3:3:0 ea.)

662R. Seminar in the Theory and History of Theatrical Costuming. (3:3:0 ea.)

664. Theatre Management 1. (2:2:2)

665. Theatre Management 2. (2:2:2)

668R. Special Studies in Theatre, Film, or Television. (1–3:0:0 ea.)

670. Advanced Set Construction. (3:3:3)

671R. Advanced Directing. (3:2:2 ea.)

674R. Projects in Theatre and Film. (1–4:0:0 ea.)

678. Advanced Stage Lighting. (3:2:2)

680R. Advanced Film Production. (5:4:0 ea.)

685R. Screenwriting 4. (3:3:0 ea.)

687R. Motion Picture Directors. (3:2:3 ea.)

689. Motion Picture History. (3:2:3)

690. Introduction to Graduate Studies in Theatre and Film. (3:3:0)

697R. Seminar and Production: Special Theatre Forms. (2–3:2:2 ea.)

698R. Master's Project. (1–6:Arr:Arr. ea.)

699R. Master's Thesis. (1–9:Arr:Arr. ea.)

700R. Master Seminar. (3:3:0 ea.)

731. Dramatic Theory and Criticism 1. (3:3:0)

732. Dramatic Theory and Criticism 2. (3:3:0)

772R. Seminar in Child Drama. (3:3:0 ea.)

788R. Symposium for Filmmakers. (3:3:0 ea.)

797R. Research. (1–18:Arr:Arr. ea.)

799R. Doctoral Dissertation. (1–18:Arr:Arr. ea.)

Thai

See Asian and Near Eastern Languages.

Turkish

See Asian and Near Eastern Languages.

Ukrainian

See Germanic and Slavic Languages.

Vietnamese

See Asian and Near Eastern Languages.

Welsh

See Linguistics.

Youth Leadership

See Recreation Management and Youth Leadership.

Zoology

H. Duane Smith, Chair (575 WIDB, 378-2492)

Professors

Andersen, Ferron L. (1967) BS, MS, Utah State U., 1957, 1960; MS, U. of Illinois, 1962; PhD, Utah State U., 1963.

Barnes, James R. (1969) BS, Brigham Young U., 1963; MS, PhD, Oregon State U., 1967, 1972.

Baumann, Richard W. (1975) BA, MS, PhD, U. of Utah, 1965, 1967, 1970.

Black, Hal L. (1975) BS, MS, U. of Utah, 1966, 1968; PhD, U. of New Mexico, 1972.

Booth, Gary M. (1972) BS, MS, Utah State U., 1963, 1966; PhD, U. of California, Riverside, 1969.

Bradshaw, William S. (1970) BA, Harvard U., 1963; PhD, U. of Illinois, 1968.

Farmer, James L. (1969) BS, California Inst. of Technology, 1960; PhD, Brown U., 1966.

Heckmann, Richard A. (1972) BS, MS, Utah State U., 1954, 1958; PhD, Montana State U., 1970.

Heninger, Richard W., Associate Dean (1966) BS, Brigham Young U., 1957; MS, PhD, Oklahoma State U., 1959, 1961.

Jeffery, Duane E. (1969) BS, MS, Utah State U., 1962, 1963; MA, PhD, U. of California, Berkeley, 1966, 1972.

Jorgensen, Clive D. (1960) BS, MS, Brigham Young U., 1954, 1957; PhD, Oregon State U., 1964.

Rhees, Reuben Ward (1973) BS, U. of Utah, 1967; PhD, Colorado State U., 1971.

Seegmiller, Robert E. (1972) BS, MS, U. of Utah, 1965, 1967; PhD, McGill U., 1970.

Sites, Jack W., Jr. (1982) BS, MS, Austin Peay State U., 1973, 1975; PhD, Texas A&M U., 1980.

Smith, H. Duane (1969) BS, MS, Brigham Young U., 1963, 1966; PhD, U. of Illinois, 1969.

Tolman, Richard R. (1982) BS, MS, U. of Utah, 1963, 1964; PhD, Oregon State U., 1969.

Van De Graaff, Kent M. (1975) BS, Weber State Coll., 1965; MS, U. of Utah, 1969; PhD, Northern Arizona U., 1973.

White, Clayton M. (1970) BA, PhD, U. of Utah, 1961, 1968.

Winder, William W. (1982) BS, PhD, Brigham Young U., 1966, 1971.

Associate Professors

Braithwaite, Lee F. (1964) BS, MS, PhD, Brigham Young U., 1959, 1962, 1970.

Maurer, Brian A. (1986) BS, Brigham Young U., 1977; MS, West Virginia U., 1980; MS, PhD, U. of Arizona, 1982, 1984.

Shiozawa, Dennis Kenji (1978) BA, Weber State Coll., 1972; MS, Brigham Young U., 1975; PhD, U. of Minnesota, St. Paul, 1978.

Smith, Lamont W. (1970) BS, Brigham Young U., 1960; MS, U. of Wisconsin, Madison, 1962; PhD, West Virginia U., 1970.

Whitehead, Armand T. (1969) BS, Brigham Young U., 1965; PhD, U. of California, Berkeley, 1969.

Assistant Professors

Belk, Mark C. (1992) BS, MS, Brigham Young U., 1985, 1987; PhD, U. of Georgia, 1992.

Bell, John D. (1990) BS, Brigham Young U., 1982; PhD, U. of California, San Diego, 1987.

Evans, R. Paul (1987) PhD, Medical Coll. of Virginia, 1983.

Judd, Allan M. (1991) BS, MS, Brigham Young U., 1973, 1978; PhD, West Virginia U., 1982.

Kaliszewski, Marek J. (1989) MS, PhD, A. Mickiewicz U., Poland, 1977, 1981.

Rogers, Duke S. (1989) BS, MS, Texas A&M U., 1976, 1979; PhD, U. of California, Berkeley, 1986.

Collaborators

Bogel, Fuller, Taylor, Thompson, Whatcott

Emeriti

Allen, A. Lester (1954) BA, PhD, U. of California, Los Angeles, 1946, 1951.

Allman, Verl Phillips (1950) BS, MS, Brigham Young U., 1948, 1952.

Allred, Dorald M. (1956) BA, MA, Brigham Young U., 1950, 1951; PhD, U. of Utah, 1954.

Chapman, Arthur O. (1959) BA, Brigham Young U. 1941; MA, U. of Kansas, 1949; PhD, U. of Nebraska, Omaha, 1953.

Frost, Herbert H. (1960) BA, MA, Brigham Young U., 1941, 1947; PhD, Cornell U., 1955.

Hayward, C. Lynn (1930) BS, MS, Brigham Young U., 1927, 1931; PhD, U. of Illinois, Chicago, 1941.

Jaussi, August W. (1962) BS, U. of Idaho, 1953; MS, Brigham Young U., 1955; PhD, Oklahoma State U., 1960.

Nicholes, Henry J. (1946) BA, Brigham Young U., 1935; PhD, U. of Wisconsin, Madison, 1941.

Pritchett, Clyde L. (1967) BS, MS, Brigham Young U., 1960, 1962; PhD, U. of Wyoming, 1977.

Simmons, Elbert R. (1956) BS, Utah State U., 1941; MA, U. of Iowa, 1943.

Tanner, Wilmer W. (1949) BA, MA, Brigham Young U., 1936, 1937; PhD, U. of Kansas, 1949.

Tipton, Vernon J. (1968) BS, MS, Brigham Young U., 1948, 1949; PhD, U. of California, Berkeley, 1959.

Wood, Stephen L. (1956) BS, MS, Utah State U., 1946, 1948; PhD, U. of Kansas, 1953.

Programs and Degrees

BS Zoology

Emphases:
Entomology

Human Biology

Premedical-Predental
Zoology

BS Conservation Biology

Emphases:

Wildlife Biology

Ecology and Systematics

BS Honors in Zoology and University
Honors

BS Molecular Biology

BS Biology Composite Teaching

MS Zoology

MS Biological Science Education

MS Molecular Biology (collegewide
interdisciplinary degree)

PhD Zoology

PhD Molecular Biology (collegewide
interdisciplinary degree)

Students who major in zoology and demonstrate academic competence find numerous employment options, ranging from technical work in research laboratories to field technicians for environmental research companies. One may develop expertise and interest in such diverse areas as community health, disease transmission, environmental biology, evolutionary biology, freshwater biology, human biology, marine biology, molecular biology, nutrition, organ transplants, pest control, taxonomy, and wildlife management.

Students who complete the zoology core course requirements and take the recommended chemistry, mathematics, and physics courses satisfy the requirements for medical and dental schools, as well as for graduate studies in almost all areas of biological teaching and research. Those planning to teach biology and general science in secondary school or biology in junior college may also certify with a major in this department.

Graduate Programs

See the 1993-94 BYU Graduate Studies Catalog.

Program Requirements

No D grade in any zoology course will be accepted for graduation.

Suggested Sequence of First-Year Courses

	F	W
Math 119*		4
Biol 130**	4	
Zool 204		4
Chem 105,*** 106, 107	4	3, 1
Engl 115	3	
RelA 121, 122	2	2
Electives	3-4	2
Total	16-17	16

*Specific emphasis or degree might require another mathematics course.

**Biol 100 does not count toward a BS degree in zoology.

***For other acceptable chemistry sequences, look under the degree requirements for BS Zoology, and BS Conservation Biology.

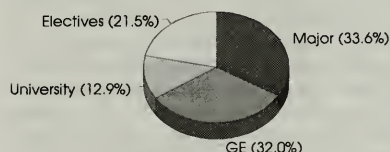
BS Zoology

I. Biol 130; Zool 204, 341, 342, 343, 350, 351, 460, 475; 6 hours minimum from Zool 312, 317, 318, 330, 331, 344, 358, 363, 380, 399R, 402, 414, 416, 418, 443, 445, 446, 447, 449R (1 hour only), 457, 461, 476, 484, 526, 531, 532, 536, 537, 538, 540, 546, 547, 556, 560, 565, 566, 572, 584, 585, Range 551, 552.

II. Math 119; Phscs 105, 106, 107, 108; or 121, 122, 221, 222; and one of the following chemistry sequences:

- Chem 105, 106, 107, 152.
- Chem 105, 106, 107, 351, 352, 353.
- Chem 101, 103, 152, 181.

Summary of Degree Requirements for BS Zoology



- Total hours 128.0
- Major hours 43.0
- General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
- University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- Elective hours 27.5
- 40 hours upper-division GPA requirement of 2.0
- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Entomology Emphasis

I. Biol 130; Zool 204, 330, 331, 341, 342, 350, 351, 460, 475, 532; two courses minimum from Zool 531, 536, 537, 538.

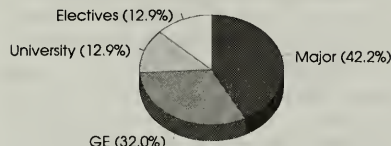
II. Math 119; Stat 222 or 501; Phscs 105, 106, 107, 108; or 121, 122, 221, 222; and one of the following sequences:

- Chem 105, 106, 107, 152.
- Chem 105, 106, 107, 351, 352, 353.
- Chem 101, 103, 152, 181.

See your academic advisor to determine which sequence to take.

III. Recommended classes: Mcbio 221, 222 or Botny 210.

Summary of Degree Requirements for Entomology Emphasis



- Total hours 128.0
- Major hours 54.0
- General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
- University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- Elective hours 16.5
- 40 hours upper-division GPA requirement of 2.0
- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Human Biology Emphasis

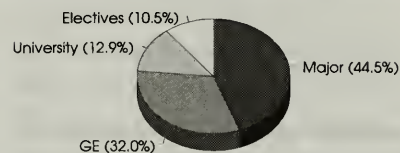
I. Biol 130; Zool 204, 250 (or 350), 260, 341, 342, 460, 475; RelC 491, 492 (491 and 492 are to be taken simultaneously; because they are the same as Zool 338, you may register for RelC 491 and 492 or Zool 338, but not both).

II. Choose 9 hours (not more than one class from each department) from FSN 200, 356; Anthr 300; FamSc 210, 360; Mcbio 221, 311; Hlth 451, 460.

III. Chem 105, 106, 107, 351, 352, 353; Phscs 105, 106, 107, 108; Math 119.

IV. One of Zool 317, 380, 461, 476, 484, 565; one of Psych 350, 359, 381, 382, 584; one of Soc 311, 329, 345, 350, 365, 389.

Summary of Degree Requirements for Human Biology Emphasis



- Total hours 128.0
- Major hours 57.0
- General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0
 - Advanced Math/Foreign Language 7.0
 - Advanced Writing 3.0
- University requirements 16.5
 - Religion 14.0
 - PE/Health 2.5
- Elective hours 13.5
- 40 hours upper-division GPA requirement of 2.0
- Estimated semesters to graduate
 - 13 hours per semester 10.0
 - 16 hours per semester 8.0
- Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

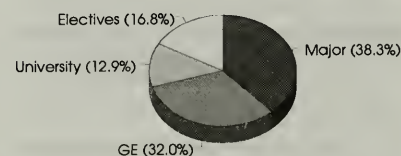
♦Note: Hours do not include any course that could be used to fill GE or university requirements.

Premedical-Predental Emphasis

I. Biol 130; Zool 204, 250 (or 350, 351), 341, 342, 343, 460, 475; 6 hours minimum from Zool 312, 317, 318, 330, 331, 344, 358, 363, 380, 399R, 402, 414, 416, 418, 443, 445, 446, 447, 449R (1 hour only), 457, 461, 476, 484, 526, 531, 532, 536, 537, 538, 540, 546, 547, 556, 560, 565, 566, 572, 584, 585, Range 551, 552.

II. Math 119; Chem 105, 106, 107, 351, 352, 353; Phscs 105, 106, 107, 108; or 121, 221. See preprofessional advisor in 380 WIDB to determine which physics sequence to complete.

Summary of Degree Requirements for Premedical-Predental Emphasis



- Total hours 128.0
- Major hours 49.0
- General Education requirements 41.0
 - Core 16.0
 - First-Year Writing 3.0
 - Arts and Sciences electives 12.0

Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	21.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BS Conservation Biology

Wildlife Biology Emphasis

This major fulfills the educational requirements suggested by the Wildlife Society for its Professional Wildlife Biologist Certification Program. Students with this emphasis fully qualify on the Federal Register for employment as wildlife biologists and are prepared for eventual professional affiliations with state wildlife agencies as well as a number of federal and international agencies. The major is an excellent choice for those planning to enter wildlife or conservation biology graduate programs. Students taking this emphasis also qualify as conservation biologists.

I. Biol 130; Zool 204, 344, 446, 447, 457, 475; Botny 210, 407; Range 225, 330, 505, 565.

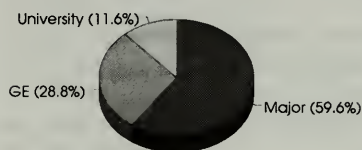
II. Chem 101, 103, 152; Math 119; Stat 222.

III. One of Phys 100, AgHrt 282, Geol 104; Geog 212; one of Zool 350, Botny 350, Range 354; one of Zool 351, Botny 351, Range 351; one of Botny 276, 341; one of Zool 460, Chem 181, Botny 440; one of Range 455 or Geog 515.

IV. Complete 9 hours in humanities and social sciences. Complete 12 hours in communications. Complete 6 hours in policy, administration, and law. Consult your advisor for assistance.

V. Recommended: Zool 330, 556; Comms 150, 255; Econ 240; Geog 310, 401, 480, 586; PlSc 535, 536.

Summary of Degree Requirements for Wildlife Biology Emphasis



1. Total hours	142.5
2. Major hours ♦	85.0
3. General Education requirements	41.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	0.0
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	11.0
16 hours per semester	9.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

Ecology and Systematics Emphasis

I. Biol 130; Botny 210.

II. Zool 204, 341, 342, 350, 351, 475.

III. Zool 460 or Botny 440.

IV. Zool 559R (Ecology, 1 hour).

V. Four hours from Zool 317, 331, 402, 443, 445, 446, 447; two hours from Zool 312, 358, 363, 493, 532, 536, 537, 540, 546, 547, 556.

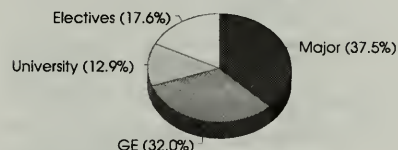
VI. Stat 222 or equivalent (see advisor); Phscs 105, 106; Chem 101, 103, 152, 181 or Chem 105, 106, 107, 152, 181 or equivalent (see advisor).

VII. Math 119 or equivalent (see advisor).

VIII. Those considering graduate school should see an advisor for further direction.

IX. If time permits, some of the following courses may be useful (see advisor): AgHrt 282, 283; Botny 400, 405, 510, 520, 539, 550, 554; CS 130, 131; Econ 440; Geol 480; Geog 212, 310, 331, 401; Mcbio 441, 442; PlSc 330, 340, 535, 536; Range 330, 455, 465, 505, 565; Zool 343.

Summary of Degree Requirements for Ecology and Systematics Emphasis



1. Total hours	128.0
2. Major hours ♦	48.0
3. General Education requirements	41.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	22.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦**Note:** Hours do not include any course that could be used to fill GE or university requirements.

BS with Honors in Zoology and University Honors

I. Honors Program requirements:

- A. Honors General Education graduation requirements as listed in the Honors Education section of this catalog. The Foreign Language proficiency requirement should be met in Spanish, German, Russian, French, Japanese, or an approved substitute.
- B. All GE requirements not met through advanced placement (AP) are to be filled by taking Honors sections of GE courses where possible.

II. Zoology requirements:

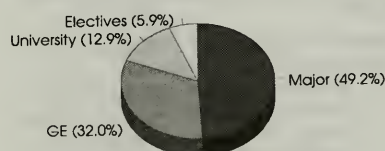
- A. Biol 130; Zool 204, 249M, 250 (or 350, 351), 341, 342, 343, 349M, 460, 475, 493; 6 hours minimum from Zool 312, 317, 318, 330, 331, 344, 358, 363, 378, 380, 399R, 402, 414, 416, 418, 443, 445, 446, 447, 449R (1 hour only), 457, 459, 461, 476, 484, 526, 531, 532, 536, 537, 538, 540, 546, 547, 551, 556, 560, 565, 566, 572, 584, 585.
- B. Chem 105, 106, 107, 351, 352, 353; Math 119 (or 112H, 113H); HonP 344R (Bioethics); Phscs 105, 106, 107, 108 or 121, 221.
- C. Complete an Honors thesis in zoology and register for a minimum of 3 credit hours of Zool 499R.

1. Thesis suitable for publication must be completed under direction of faculty member in Department of Zoology.
2. Thesis proposal must be approved by department chair and Honors Program Office before research is begun.
3. Students intending to graduate with Honors in zoology may elect to receive support as research assistants during spring and summer terms between their junior and senior years for purpose of performing necessary research.
4. Oral presentation of results of research will be made at Zoology Department seminar or some comparable forum.
5. Departmental approval for thesis is obtained through usual Honors Program procedure for approval of Honors theses.

BS Molecular Biology

- I. Biol 130; Zool 204, 250 (or 350, 351), 341, 342, 343, 460, 475.
- II. Math 112, 113; Phscs 121, 122, 221, preferred (or 105, 106, 107, 108); Chem 105, 106, 107, 351, 352, 353, 481, 586; Mcbio 351, 441, 442.

Summary of Degree Requirements for BS Molecular Biology



1. Total hours	128.0
2. Major hours ♦	63.0
3. General Education requirements	41.0
Core	16.0
First-Year Writing	3.0
Arts and Sciences electives	12.0
Advanced Math/Foreign Language	7.0
Advanced Writing	3.0
4. University requirements	16.5
Religion	14.0
PE/Health	2.5
5. Elective hours	7.5
6. 40 hours upper-division GPA requirement of 2.0	
7. Estimated semesters to graduate	
13 hours per semester	10.0
16 hours per semester	8.0
8. Students are encouraged to complete 16 credit hours each semester. Taking fewer credits substantially increases the cost and the number of semesters to graduate.	

♦Note: Hours do not include any course that could be used to fill GE or university requirements.

BS Biology Composite Teaching

See Biology in the Secondary Education section of this catalog for information about this teaching major.

Minor

Biol 130, Zool 204; plus 6 hours from Zool 250 (or 350, 351), Botny-Mcbio-Zool 375, 385, 460, 475.

Zoology (Zool)

Undergraduate Courses

Biology Courses

See Biology Department for descriptions.

+100. Principles of Biology. (3:3:0)

+101. Principles of Biology Laboratory. (1:0:2)

+130. Introduction to Biology. (4:5:0)

+398R. Biology Teaching Seminar. (1-2:0:0 ea.)

Zoology Courses

139. Freshman Premedical Seminar. (0.5:0.5:0) F, W

Introduces freshman students to BYU premedical program.

204. Vertebrate and Invertebrate Strategies. (4:3:3) F, W, Sp, Su

Comparative organization and evolutionary significance of adaptive morphological, physiological, behavioral, reproductive, and ecological differences in vertebrates and invertebrates.

205. Human Biology. (3:3:0) F, W

Metabolism, physiology of nervous system, endocrinology, reproduction, embryology, and genetics. For nonbiology majors.

221. History of Medicine. (2:2:0) F

Prerequisite: Zool 139. Growth of medicine and its role in society, the art of medicine, intellectual and ethical legacy of earlier practitioners.

227. Preview into Optometry. (1:Arr:0) F, W

For sophomores and juniors. Advantages and disadvantages of the optometric profession. Applying to and preparing for optometry school. For sophomores and juniors. Not acceptable for zoology major credit.

229. Preview into Dentistry. (1:Arr:0) F, W

For freshmen and sophomores. Advantages and disadvantages of the dental profession. Application to and preparation for dental school. Not acceptable for zoology major credit.

249M. Honors Introduction to Zoology. (0.5:1:0) Open to all zoology majors.

Presentation of major biological concepts and issues.

250. (Zool-Botny) Environmental Biology. (3:3:0) F, W, Sp Prerequisite: Biol 100 or equivalent.

Conservation and management of natural resources concurrent with increasing socioeconomic and human population demands.

260. Elementary Human Anatomy. (3:2:2) F, W, Sp, Su Honors also.

Primarily for students of physical education and physical therapy. Recommended for students of nursing. Not acceptable for zoology major credit.

261. Elementary Human Physiology. (4:3:2) F, W, Sp, Su Honors also. Prerequisite: Chem 101 or equivalent. Recommended: one biology course.

Normal functions and integrations of major body organ systems. Not acceptable for zoology major credit.

276. Human Heredity and Reproduction. (3:3:0) F, W, Alt. term Prerequisite: any biology course or instructor's consent.

Principles of inheritance and reproduction for nonscience majors and biological education majors.

312. Introduction to Marine Biology. (3:3:0) W, Sp Prerequisite: Zool 204.

Marine life, the sea as an environment, and research methods.

317. Medical Parasitology. (3:2:3) F

Prerequisite: Biol 100 or equivalent. Pathogenesis, diagnosis, and epidemiology of parasitic diseases of humans.

318. Veterinary Parasitology. (3:2:3) W

Diagnosis, pathogenesis, and epidemiology of parasitic diseases of domestic animals.

329. Dental School Preparation. (2:1:1) F, W

Prerequisite: Zool 229. Practical experience in the areas of dental anatomy, terminology, carving teeth, and dental operator techniques. Not acceptable for zoology major credit.

330. Field Entomology. (2:0:Arr) Su

Training in field observation of insect habits and behavior in collecting, preparing, and preserving insects.

331. Introductory Entomology. (3:2:3) F, Sp

Prerequisite: Biol 100 or equivalent. Structure, classification, and biology of insects and selected arthropod relatives.

334. Appreciation of Nature. (3:2:2) F, W, Sp, Su Prerequisite: basic biology course.

Identifying common plants and animals; techniques for teaching natural history.

338. Bioethics. (2:1:2) F, W Prerequisite: introductory biology course.

Ethical issues relating to emerging biomedical technology. Same as RelC 491, 492.

339. Preview into Medicine. (2:2:0) F, W For sophomore, junior, and transfer students.

Medical education (admission procedures, curriculum), medical specialties in practice, ethics, legal and governmental concerns, health care delivery systems, and related professions. Not acceptable for zoology major credit.

341. (Zool-Botny-Mcbio) Genetics and Cellular Biology 1. (4:4:1) F, W, Sp Prerequisite: Biol 130.

General genetics and molecular biology of cellular structure and function.

342. (Zool-Botny-Mcbio) Genetics and Cellular Biology 2. (3:3:1) F, W, Su Prerequisite: Zool-Botny-Mcbio 341.

Continuation of Zool-Botny-Mcbio 341.

343. (Zool-Botny-Mcbio) Genetics and Cellular Biology Laboratory. (1:0:3) F, W, Su Prerequisite: prior or concurrent registration in Zool-Botny-Mcbio 342.

344. Natural History of Wildlife. (4:2:4) F, Sp Prerequisite: Zool 204.

Intensive study of selected vertebrate wildlife species stressing natural history and systematics.

349M. Senior Thesis Research Rotation. (1:0:1) Prerequisite: Biol 130.

Individual research with three zoology faculty in preparation for selecting senior thesis topic.

350. (Zool-Botny) Ecology. (3:3:0) F, W, Sp Prerequisite: Biol 130 or equivalent.

Principles and theory of plant and animal ecology. Analyzing distribution and abundance of life on earth.

351. (Zool-Botny) Ecology Laboratory. (1:0:3) F, W, Sp Prerequisite: Botny-Zool 350 or concurrent registration.

Introduction to major ecological concepts through field or laboratory exercises, emphasizing appropriate methods for measuring variation under field conditions. Field trips and one major paper required.

358. Freshwater Biology. (3:2:3) On dem. Prerequisite: Zool 350.

Biology of freshwater organisms, physical and chemical characteristics of fresh waters—lakes, streams, and reservoirs.

361. Pathophysiology. (4:4:0) F, W, Sp Prerequisite: Chem 101; 181, Zool 260, 261, or concurrent registration.

Variations in physiological mechanisms that account for the development of the most common disturbances of the normal control and activities of organs and organ systems of the body. Not acceptable for zoology major credit.

363. Comparative Vertebrate Anatomy. (4:3:3) W Prerequisite: Zool 204.

Basic phylogenetic principles, classification, paleontology, and evolutionary history of vertebrates; anatomy, functional morphology, and adaptations of vertebrates.

380. Histology. (4:3:3) F, W, Su Prerequisite: Biol 130 or equivalent.

399R. Cooperative Education: Zoology Internship. (1–9:0:0 ea.) F, W, Sp, Su Prerequisite: consent of department cooperative education coordinator.

On-the-job experience with government, industry, etc.

402. Advanced Invertebrate Zoology. (5:4:2) Prerequisite: Zool 204.

Functional morphology, cladistics, ecology, and interrelationships of the invertebrates.

414. Marine Ecology. (3:2:3) Sp Prerequisite: Zool 312 and instructor's consent.

Principles of marine ecology of planktonic, sublittoral, rocky shore, sandy shore, and mudflat communities. Extensive field trips.

416. Development of Marine Animals. (2:0:6) Sp

Techniques of culturing, studying, and reporting on the development of eggs, embryos, and larvae of marine animals.

418. Aquaculture. (3:2:2)

Programs and methods for the culturing of economic freshwater and marine animals.

429. Clinical Observation for Predental Students. (2:1:3) F, W, Sp Prerequisite: Zool 329.

Experience in local dental offices for junior and senior predental students. Not acceptable for zoology major credit.

435. Medical Entomology. (3:2:2) W alt. yr. Recommended: Zool 331.

Insects and arachnids that affect health of human beings and domestic animals.

439. Clinical Observation for Premedical Students. (2:1:3) F, W, Sp Prerequisite: Zool 339; junior or senior standing and instructor's consent.

Observing with practicing physician and in hospitals. Not acceptable for zoology major credit.

443. Ichthyology. (4:3:3) F alt. yr. Prerequisite: Zool 204.

In-depth study of fish systematics, evolution, morphology, distribution, and natural history.

445. Herpetology. (3:2:2) On dem. Prerequisite: Zool 204.

In-depth study of reptile and amphibian systematics, evolution, morphology, distribution, and natural history.

446. Ornithology. (3:2:2) W Prerequisite: Zool 204.

In-depth study of avian systematics, evolution, distribution, and natural history.

447. Mammalogy. (3:2:2) F Prerequisite: Zool 204.

In-depth study of mammalian diversity, distribution, and natural history. Three-day field trip required.

449R. Undergraduate Research.

(1–3:Arr:Arr. ea.) F, W, Sp, Su Prerequisite: instructor's consent.

Maximum of 1 hour's credit may be used in zoology elective toward graduation.

457. Wildlife and Fishery Management Techniques. (3:2:3) W Prerequisite: Zool 350.

Practical study of current methods used to assess and manage wildlife and fish resources.

460. Principles of Physiology. (4:4:3) F, W, Sp Prerequisite: Biol 130 and one year of chemistry or equivalent.

General physiological principles and control of organ systems.

461. Physiology and Drug Mechanisms. (3:2:3) F Prerequisite: Zool 460 or instructor's consent.

Function and regulation of organ systems in mammals. Relationships between normal functions and biological and physiological effects of drugs.

475. (Zool-Botny) Evolutionary Science. (3:3:0) F, W, Alt. term Prerequisite: preceding courses in college core curriculum or instructor's consent.

Observed organic change and apparent history of life on earth. Comparing study methods, interpreting data, evaluating evidence.

476. Human Genetics. (3:3:0) On dem. Prerequisite: genetics course.

Research literature, methodology, and data pertaining to humans as distinct genetic organisms.

484. Human Embryology. (3:3:0) Alt. sem. Prerequisite: Zool 204.

Developmental milestones of prenatal life; etiology of congenital malformations, emphasizing cellular changes and their functional consequences.

493. History and Philosophy of Biology. (3:2:1) W Prerequisite: zoology core courses through 475.

Emphasis on major themes such as (1) reductionism and compositionism; (2) stasis vs. change at various levels; (3) objective vs. subjective natural laws; (4) conservation/exploitation; humans as stewards.

499R. Senior Honors Thesis. (1–3:0:3 ea.)

Honors thesis. Topic to be cleared with Honors Program Office and Zoology Department.

Advanced Undergraduate or Graduate Courses

503. Research Orientation. (1:1:0) F

Departmental graduate procedures; techniques used in researching zoological literature. Required first fall semester of graduate study.

504. Research Methodology. (1:0:3) W

Prerequisite: Zool 503.

Techniques of zoological research and manuscript preparation.

515R. Advanced Science In-Service. (1-5:Arr.:Arr. ea.)

In-service course for science teachers. Subjects may include:

- Advanced Topics Science In-Service
- Ecology Science In-Service
- Genetics Science In-Service
- Evolution Science In-Service
- Botany Science In-Service
- Meteorology Science In-Service

526. (Zool-Botny) Cell Biology. (3:3:0) F alt. yr. Prerequisite: introductory course in biochemistry.

Molecular physiology and ultrastructure of cells, emphasizing eukaryotic organisms.

531. Insect Physiology. (4:2:6) W even yr. Prerequisite: Zool 331; Chem 152 or 351.

Internal anatomy and physiology of insects.

532. Insect Classification. (4:1:9) W odd yr. Prerequisite: Zool 331. Recommended: Zool 330.

Insect systematics emphasizing external morphology, natural history, evolution, distribution, and phylogeny. Insect collection required.

536. Comparative Toxicology. (3:2:3) W Prerequisite: general biology and an organic chemistry course.

Modes of action and biological transformations of pesticides in living animals, plants, and the environment, emphasizing techniques.

537. Aquatic Entomology. (2:1:3) F alt. yr. Recommended: Zool 331.

Morphology, classification, biology, and functional ecology of aquatic insects.

538. Immature Insects. (2:0:4) F alt. yr. Recommended: Zool 331.

Morphology, systematics, and biology of immature insects.

540. Zoogeography. (2:2:0) F even yr. Prerequisite: Zool 204.

Methods for analyzing distribution of animals; distribution of major animal groups emphasizing island biogeography as a critical principle.

546. World Bird Families. (4:4:0) W odd yr. Recommended: Zool 446.

Distribution, composition, and characteristics of world bird families, using museum specimens.

547. Raptor Biology. (2-4:Arr.:0) W even yr. Recommended: Zool 446.

Biology and conservation of major groups of predatory birds, using museum specimens.

549R. Advanced Topics in Zoology. (1-4:Arr.:Arr. ea.) On dem. Prerequisite: instructor's consent.

- Subjects may include:
- Anatomical Preparations
 - Histological Techniques
 - Diseases of Fish
 - Advanced Mammalogy
 - Advanced Ornithology
 - Wildlife Diseases

556. Limnology. (4:3:3) W alt. yr. Prerequisite: Zool 350.

Biotic and physical-chemical properties of lakes and streams. Saturday field trips required.

559R. Advanced Topics in Ecology and Systematics. (1-4:Arr.:Arr. ea.) Prerequisite: instructor's consent.

- Subjects may include:
- Advanced Ecology
 - Tropical Biology
 - Evolutionary Biology

560. Advanced Human Anatomy. (2:1:1) F Prerequisite: Zool 260 or 363 and instructor's consent.

Anatomical facts of clinical significance, with opportunity to dissect cadavers.

565. Endocrinology. (3:3:0) W Prerequisite: Zool 460 or equivalent.

Study of mammalian hormones.

566. Experimental Endocrinology. (2:0:6) W Prerequisite: Zool 565 or concurrent registration.

Techniques used in research.

569R. Advanced Topics in Entomology. (1-4:Arr.:Arr. ea.) Prerequisite: instructor's consent.

- Subjects may include:
- Insect Taxonomy
 - Insect Ecology
 - Insect Physiology
 - Acarology

572. Gene Regulation. (3:3:0) F even yr. Prerequisite: Zool-Botny-Mcbio 342.

Molecular basis of gene regulation in eukaryotic cells. Emphasis on transcriptional and post-transcriptional controls in nuclear and organellar genomes of animals and plants.

579R. Advanced Topics in Genetics. (1-4:Arr.:Arr. ea.) Prerequisite: instructor's consent.

Subjects may include:

- Molecular Evolution
- Teratology Techniques

584. (Zool-Psych) Neurophysiology. (3:3:0) W Prerequisite: Zool 460 or equivalent.

Physiology of nerve cells and neuronal interactions.

585. Developmental Biology. (3:3:0) F odd yr. Prerequisite: Zool-Botny-Mcbio 342.

Cellular and biochemical mechanisms that achieve differentiation in the developing embryo.

589R. Advanced Topics in Physiology. (1-4:Arr.:Arr. ea.) Prerequisite: instructor's consent.

Subjects may include:

- Reproduction and Neuroendocrinology
- Renal and Gastrointestinal Physiology
- Cardiovascular and Respiratory Physiology

591R. Special Problems in Zoology. (1-2:Arr.:Arr. ea.) F, W, Sp, Su Prerequisite: instructor's consent.

Graduate Degree Courses

See also the 1993-94 BYU Graduate Studies Catalog.

602. Theoretical Ecology. (4:4:0)

603. Ecological Data Analysis. (4:3:1)

604. Phylogenetic Systematics. (3:3:0)

605. Molecular Methods in Systematics and Population Biology. (5:2:3)

663R. Experimental Physiology. (2:1:3 ea.)

696R. Graduate Seminar. (0.5:1:0 ea.)

698R. Master's Project. (1-6:6:0 ea.)

699R. Master's Thesis. (1-18:Arr.:Arr. ea.)

799R. Doctoral Dissertation. (1-9:Arr.:Arr. ea.)

Division of Continuing Education

Dean: Richard C. Eddy (399 HCEB)
Associate Dean: Richard H. Henstrom (397 HCEB)
Associate Dean: Wayne J. Lott (395 HCEB)
Assistant to the Dean—Church Educational System: Kenneth W. Anderson (105 HCEB)
Assistant to the Dean—Financial and Administrative Services: A. Lynn Abbott (307 HCEB)

The purpose of the Division of Continuing Education is to provide educational programs and university services for part-time and off-campus students. These educational opportunities also assist regular daytime students. BYU cooperates with the Continuing Education programs as sponsored by the Church Educational System and its various components. The same university standards required of regular day students apply to those enrolled through the Division of Continuing Education while they are on campus.

Organization. Because the Continuing Education programs represent both BYU and the Church Educational System, the department and center descriptions will be distinguished in the material that follows.

Requirements for Enrollment in Continuing Education Classes.

Noncredit classes are open to anyone having the desire and the necessary ability.

Credit classes are open to:

1. Matriculated students.
2. Anyone twenty-three years of age or older.
3. Individuals desiring to audit courses.
4. High school students in their junior or senior year who have a 3.0 GPA (may concurrently enroll in selected workshops and seminars if authorized by the University Admissions Committee).

Students who have been suspended from Brigham Young University or any other institution of higher learning for any reason are not eligible to register in Continuing Education credit classes until such suspension is cleared.

Enrollment Limitations. Persons enrolling in credit courses offered by the Division of Continuing Education who are officially admitted to the university can take any

courses offered to a maximum of 18 credit hours per semester (9 hours per term). All others, twenty-three years of age and older, who have not been formally admitted to the university are limited to a maximum of 7 credit hours per semester (4 hours during spring or summer term). Contact the Division of Continuing Education for any additional conditions of enrollment.

Student Responsibility. Acceptance in a Continuing Education course *does not* constitute acceptance by BYU or any other university on a degree-seeking basis. It is the student's responsibility to gain admission to the university of his or her choice as a degree-seeking student through the normal procedures. At BYU students may accomplish this through the Office of Admissions and Records.

Note: Students enrolled in the Division of Continuing Education would not be eligible for university employment, housing, or financial aid except for that assistance available to part-time students through the Division of Continuing Education.

Departments and Programs

Evening Classes

Kenneth W. Anderson, Director (105 HCEB, 378-2872)

The Department of Evening Classes' major responsibility is to provide college-level educational opportunities for adults age twenty-three and older. In addition, the department is a service for daytime students who experience scheduling difficulties or prefer the evening sections, which usually meet only once a week. Classes contributing to bachelor's and graduate degrees are offered.

A schedule of courses is published each semester and is available on request at the Evening Classes Office, 120 HCEB. Evening classes are also listed in the daytime class schedule as sections 400 and above.

Independent Study (Formerly Home Study)

Ralph A. Rowley, Director (206 HCEB, 378-2868)

Independent Study is the university's "portable program" that can bring BYU to students anytime, anywhere. Through Independent Study, BYU offers nearly 300 college-level credit courses, providing a practical and flexible solution for university students with scheduling problems and for working students, armed forces personnel, teachers, and others who cannot take all their classes in residence.

Up to 36 semester hours of work completed through Independent Study can be used toward a bachelor's degree from BYU, and courses are also available for teacher recertification. In addition, an associate degree can be earned entirely through Independent Study: the associate of arts degree in English. Individual high school-level courses, a full high school diploma program, and noncredit courses for personal development and enrichment are also available.

Students may register for an Independent Study course at any time during the year. Formal admission to BYU is not required. Catalogs are available without charge and list all the courses available, current fees, and enrollment policies and procedures. Students are given one year to complete a course, although most do so in much less time.

Conferences and Workshops

R. Dwight Laws, Director (109 HCEB, 378-3559)

The Department of Conferences and Workshops offers a variety of programs each year (approximately 500) in the BYU Conference Center, other campus facilities, or off-campus locations. These programs are sponsored by the university's colleges, as well as by campus departments and LDS Church organizations. Credit and noncredit programs include classes, conferences, workshops, training sessions, enrichment experiences, seminars, and sports camps, available to professionals, college students, faculty, staff, adults, and youth.

BYU Conference Center

Sheri Rogde, Manager (2255 CONF, 378-7700)

The BYU Conference Center is located east of the Marriott Center and adjacent to the Harman Continuing Education Building. The primary host facility for conference guests on campus, it is especially equipped to provide a favorable learning environment for guests participating in conferences, workshops, institutes, training seminars, and other educational programs. The programs may be sponsored by a university unit or cosponsored with an off-campus professional, government, corporate, civic, recreational, religious, or community organization. The center is not available for entrepreneurial programs.

Those interested in scheduling programs in the center are invited to contact the BYU Conference Center.

Travel Study

George J. Talbot, Associate Director (309 HCEB, 378-3946)

Students who wish to enhance their education with experience abroad will want to take advantage of Travel Study programs. Utilizing modern transportation and communication, participants find the world literally at their doorsteps. Horizons are expanded, knowledge is increased, and the mind is challenged as students study and travel with professional university educators. On-site experience with the cultures and people of other lands truly makes the world BYU's campus. BYU Travel Study programs effectively combine academic, spiritual, and intercultural goals in a unique way.

Educational Tours, Cruises, Workshops, and Seminars

A variety of programs visiting the following areas of the world offers optional university credit (1–3 hours):

Europe (including Eastern Europe)
The Middle East, emphasizing Bible lands and Egypt
The Far East, including mainland China
The South Pacific
Latin America (Mexico, Central America, South America)
USA (Church history, American heritage, Alaska)
Canada
Africa
Commonwealth of Independent States (formerly U.S.S.R.)

CES Continuing Education Programs—North

Milton L. Sharp, Director (295 HCEB, 378-2528)

Church Continuing Education—North provides Continuing Education programs for the northwestern United States and Canada and also for the Northern Plains states. Four primary programs are offered: Know Your Religion Series, Know Your Religion Lecture Tours, Education Days, and Best of Especially for Youth. The department also administers CES adult religion classes throughout the United States.

CES Continuing Education Programs—South

E. Mack Palmer, Director (278 HCEB, 378-2087)

Church Continuing Education—South provides more than 135 Church Continuing Education programs in 56 locations in the geographical region from Provo south through Arizona, and from Las Vegas on the west to Texas and Oklahoma on the east. The primary programs offered are Education Days, Best of Especially for Youth, and Know Your Religion Lecture Tours.

In addition, CES—South sponsors the Campus Education Week that has been held at BYU since 1922. This one-week program serves more than 30,000 students who come to campus from all over the United States and many other countries.

CES Continuing Education Programs—Northern Utah and East

Frank Santiago, Director (209 HCEB, 378-6216)

Church Continuing Education—Northern Utah and East provides programs to the area from Salt Lake City to southern Idaho and into western Wyoming and to the southern, midwestern, and eastern United States and eastern Canada. Programs offered are: Know Your Religion and adult religion classes, Best of Especially for Youth, scripture symposia, Education Days, Education Weeks, and other religious education programs. Over 200 programs are offered each year.

CES Continuing Education Youth and Family Programs

Ronald C. Hills, Director (164 HCEB, 378-3817)

Especially for Youth, Wilderness Trek, Academy for Girls, Be the Best You, Summer Scholars Academy, family

reunions, youth conferences, programs for the deaf, and other enrichment programs are offered to youth and adults by CES Youth and Family Programs, on the BYU campus and at localities nationwide. More than 40,000 participants are served, coming from virtually every state and province in the United States and Canada and from several foreign countries.

Centers for Continuing Education

Sensing the obligation of the Church university to provide educational opportunities in harmony with LDS standards for persons living away from Provo, the board of trustees has established Continuing Education centers to offer educational programs to people in outlying areas. To earn a degree from BYU, students may do a great deal of their work at a Continuing Education center, but at least 20 semester hours of credit must be earned on the BYU campus for a baccalaureate degree (15 semester hours for an associate degree). See the Graduation Requirements section of this catalog for residence requirements. Continuing Education centers represent both BYU and the Church Educational System in their program offerings.

BYU-California Center for Continuing Education

Duane C. Lemley, Director
3323 South Workman Mill Road
Whittier, California 90601
Telephone (213) 699-1014

One hundred seventy stakes of the Church throughout California participate in the California Center's activities, which involve over 50,000 people annually. The educational activities are usually held in LDS stake centers, and events are generally cosponsored by LDS wards and stakes.

BYU-Ricks Center for Continuing Education

Ronald W. Campbell, Coordinator
Ricks College
Rexburg, Idaho 83440
Telephone (208) 356-1040
and
1776 Science Center Drive
University Place
Idaho Falls, Idaho 83401
Telephone (208) 523-4682

This center provides off-campus BYU credit classes throughout Idaho, cooperating with Ricks College in other adult and Continuing Education programs.

BYU–Salt Lake Center for Continuing Education

Orson B. Roper, Director
1521 East 3900 South
Salt Lake City, Utah 84124
Telephone (801) 277-1777

The Salt Lake Center offers courses through almost all colleges and departments of the university, making it possible for full-time and part-time students to take many of their required courses in Salt Lake City.

Many General Education requirements may be fulfilled at the Salt Lake Center.

Professional development and personalized courses for self-enrichment and certification are offered in many professional fields and areas of personal interest.

Degrees by Independent Study

James M. Rawson, Director (305 HCEB, 378-4351))

Professors

Bowen (Church History and Doctrine)
Chadwick (Sociology)
Durham (Music)
Griffen (Geology)
Harrison (Physics)
Palmer (Astronomy)
Paulsen (Philosophy)
Pixton (History)
Riddle (Philosophy)
Wimmer (Economics)

Associate Professors

Anderson (Church History and Doctrine)
Buckwalter (Political Science)
Hunsaker (English)
Johnson (Sociology)
Reeve (Ancient Scripture)
St. Clair (Botany and Range Science)
Tippetts (Art)
Tolman (Mathematics)

Assistant Professors

Choi (World Religions)
Lott (Psychology)
Norton (English)
Scanlon (Theatre and Film)
Wood (Chemistry)

Instructor

Furniss (Biology / Botany)

Programs and Degrees

BIS Bachelor of Independent Studies

Program Requirements**BIS Bachelor of Independent Studies**

The bachelor of independent studies degree involves study of a broad range of basic and relevant subjects, under the direction of

university instructors and advisors, designed especially for the adult student. It has been designed to assist those who—

1. Are already situated in a profession and desire a degree providing an extensive general education. This degree is not organized to provide students with a specific major.
2. Have varied interests, a thirst for knowledge, and a desire to continue development toward a "whole individual."
3. Are devoted to an educational program of study that provides a broad general education.
4. Are self-starters, have inquiring minds, and are motivated to learn, seeking direction and guidance through a specific program of study.
5. Are motivated to work with dedication and commitment in an especially designed program of independent studies.
6. Have a wide range of interests and enjoy reading on an organized, continuing basis.

Admission to the bachelor's degree program is by completion of the admissions procedure through Degrees by Independent Study, 315 HCEB. The application fee is \$15.

Requirements for graduation with the BIS degree include completion of three major phases of study: (1) Preparation Phase, (2) Growth Phase, and (3) Closure Phase. These phases are broken down into study areas as follows:

Preparation Phase

<i>Foundations</i>	<i>Credit hours</i>
How to think	4
How to communicate	4
Seminar	2

Growth Phase

<i>Man and the Meaning of Life</i>	
Scriptures, Church history, philosophy, world religions, learning adventures	24
Seminar	3

Man and Society

Personality, social order, family, utopias, economics, political science, race relations, history	24
Seminar	3

Man and Beauty

Literary, theatre, visual, and auditory arts	24
Seminar	3

Man and the Universe

Physics, astronomy, mathematics, chemistry, geology, botany, biology, zoology	24
Seminar	3

Closure Phase

Project	7
Seminar	3
Total hours	128

Transfer Credits and Waivers. Students who have accumulated 32 or more semester hours of approved college credit may transfer these credits to the program.

When previous college credits fully satisfy a required area of study, both the area of study and its corresponding seminar may be considered completed.

Seminars. The foundations seminar is held in June and January; remaining seminars are held during the summer.

Area of Study. On enrollment in an area of study, students will be given a complete syllabus outlining that part of the program. There are introductory and basic readings in the beginning. Experienced students may not need to dwell on these, but each student will be expected to acquire certain basic knowledge found in the assignments for a given area. Assignments may differ according to background and experience. Normally, students will write to, talk with, or send a cassette tape to the advisor at least once each month during the period of independent study in a given area. The faculty advisor is the key person who counsels in these assignments.

Obtain information and degree application materials by contacting Degrees by Independent Study, 315 HCEB, 378-4351.

Degrees by Independent Study**Undergraduate Courses****211. How to Think. (4:4:0)**

Companion course to DIS 212. Assessment as a thinker, with emphasis on logical development of ideas.

212. How to Communicate. (4:4:0)

Companion course to DIS 211. Assessment as a communicator, with emphasis on written and oral communications.

220. Seminar. (2:2:0)

Two-week, full-time, on-campus, midcourse experience with other students and faculty advisors improving skills used in college-level work.

251. Scriptures. (1–10:10:0)

Four standard works of the LDS Church.

252. Church History. (2:2:0)

Events and processes in LDS Church history that influence lives today.

253. Philosophy. (3:3:0)

Selected philosophical positions and questions.

254. World Religions. (3:3:0)

Selected world religions, their influences and contributions.

255. Learning Adventures. (6:6:0)

Scriptures, Church history, philosophy, and world religion studies focused on solving everyday problems.

260. Seminar. (3:3:0)

Two-week, full-time, on-campus experience with other students and faculty advisors integrating all "Man and the Meaning of Life" courses.

321. Personality. (3:3:0)

Man's behavior relative to personality development and acquiring and modifying beliefs and values.

322. History. (3:3:0)

Selected themes in the history of Western civilization.

323. Family. (3:3:0)

Kinship, marriage, and family behavior in various cross-cultural perspectives.

324. Social Order. (3:3:0)

Groups and social systems that influence lives.

325. Politics. (3:3:0)

Social-psychological foundations of political behavior, basic processes, and institutions.

326. Economics. (3:3:0)

Relationship between the individual and the modern economic environment.

327. Utopia. (3:3:0)

"Possible societies" or utopias, analyzing both problems and solutions.

328. Race Relations. (3:3:0)

Carefully designed social study of race relations.

330. Seminar. (3:3:0)

Two-week, full-time, on-campus experience with other students and faculty advisors investigating man in society.

341. Literary Arts. (6:6:0)

Language, literary forms, times, and traditions, and the values by which literary artistry is assessed.

342. Theatre Arts. (6:6:0)

Visual, auditory, emotional, and spiritual dimensions involved in theatre, motion picture, television, and dance.

343. Visual Arts. (6:6:0)

Developing objective standards for evaluating both traditional and environmental arts.

344. Auditory Arts. (6:6:0)

Increasing involvement with and pleasure in music; increasing perception.

350. Seminar. (3:3:0)

Two-week, full-time, on-campus experience with other students and faculty advisors enhancing appreciation of the arts.

361. Mathematics. (2:2:0)

Significant mathematical ideas, themes, and principles; examining their influences.

362. Physics. (4:4:0)

Physics involving history, reasoning processes, social attitudes, and scientific views.

363. Chemistry. (4:4:0)

Selected discoveries and ideas in chemistry, emphasizing philosophy of this science.

364. Geology. (4:4:0)

Uniformitarianism, geological times, and history and physical composition of our planet.

365. Botany. (2:2:0)

Plants, life and energy, and man's impact on environment.

366. Zoology. (2:2:0)

Environmental stewardship and the science of animal life, including theories of organic development.

367. Biology. (4:4:0)

Critical concepts of biology, with examples of their relevance to modern life and society.

368. Astronomy. (2:2:0)

Broad study of geometry and motions of the earth, moon, sun, planets, and stars in space.

370. Seminar. (3:3:0)

Two-week, full-time, on-campus experience with other students and faculty advisors focusing on natural and physical sciences.

480. Closure Project. (7:7:0)

Using skills and knowledge acquired in various DIS courses to create through research and study an academic project and report.

490. Closure Seminar. (3:3:0)

One-week on-campus experience presenting closure project to classmates before participating in university commencement.

Harold B. Lee Library

Senior Librarians

- Albrecht, Sterling J. (1966) BS, U. of Utah, 1962; MLS, Brigham Young U., 1971.
- D'Arc, James V. (1985) BA, PhD, Brigham Young U., 1978, 1986.
- Daniel, Milton R. (1986) BA, MA, Brigham Young U., 1970, 1983.
- Duvall, Scott H. (1975) BA, MLS, MA, Brigham Young U., 1972, 1975, 1977.
- Espinosa, Robert (1986) BA, U. of New Mexico, 1976.
- Fales, Susan L. (1974) BS, Utah State U., 1965; MLS, MA, Brigham Young U., 1973, 1984.
- Flake, Chad J. (1953) BA, Brigham Young U., 1953; MA, U. of Denver, 1955.
- Gillum, Gary P. (1971) BA, Concordia Senior Coll., 1968; MLS, Brigham Young U., 1971.
- Grover, Mark L. (1973) BA, MLS, Brigham Young U., 1971, 1973; MA, PhD, Indiana U., 1979, 1985.
- Hacken, Richard D. (1981) BA, Brigham Young U., 1969; MA, PhD, U. of California, Davis, 1971, 1975.
- Hall, Blaine H. (1963) BS, MA, MLS, Brigham Young U., 1960, 1965, 1971.
- Lamb, Connie (1979) BA, MS, U. of Utah, 1969, 1972; MLS, MA, Brigham Young U., 1976, 1987.
- Larsen, A. Dean (1956) BS, Brigham Young U., 1954; MA, U. of Michigan, 1960.
- Olsen, Randy J. (1972) BA, Utah State U., 1971; MLS, MPA, Brigham Young U., 1973, 1981.
- Ostler, Larry J. (1984) BA, MLS, Brigham Young U., 1966, 1971; EdD, Nova U., 1985.
- Rowley, Edward Dennis (1973) BA, U. of Colorado, 1965; MA, Case Western Reserve U., 1970.
- Whittaker, David J. (1982) BA, Brigham Young U., 1967; MA, California State U., Northridge, 1973; PhD, Brigham Young U., 1982.
- Wiggins, Marvin E. (1967) AS, Weber State Coll., 1961; BS, Brigham Young U., 1965; MLS, Rutgers U., 1967.
- Associate Librarians**
- Baker, LeGrand L. (1974) BS, Brigham Young U., 1963; MS, PhD, U. of Wisconsin, Madison, 1965, 1972.
- Benson, Larry D. (1970) BS, MLS, Brigham Young U., 1965, 1971.
- Bischoff, Janet (1987) BA, Brigham Young U., 1978; MS, U. of Illinois, 1986.
- Brown, Linda W. (1983) BS, Utah State U., 1961.
- Butler, Helen Julene (1971) BA, MLS, Brigham Young U., 1970, 1971.
- Christensen, John Owen (1981) BS, U. of Washington, 1973; MLS, Brigham Young U., 1975.
- Clement, Russell Ted (1981) BA, MLS, MA, Brigham Young U., 1976, 1977, 1983.
- Dahlin, Therrin C. (1974) BA, MLS, Brigham Young U., 1973, 1974.
- Day, David (1986) BA, MA, Brigham Young U., 1978, 1981; MS, U. of North Carolina, Chapel Hill, 1985.
- Dick, Gerald K. (1970) BA, MMu, MLS, Brigham Young U., 1962, 1967, 1968.
- Ellenburg, Doris (1986) BA, MA, California State U., Los Angeles, 1974, 1975; MLS, Brigham Young U., 1980.
- Francis, Janet O. (1977) BA, Brigham Young U., 1955.
- Hansen, Kathleen (1986) BS, MLS, Brigham Young U., 1971, 1989.
- Hawker, Alora Jane (1966) BS, MLS, Brigham Young U., 1952, 1974.
- Heath, Harvard (1984) BA, Brigham Young U., 1977.
- Hoopes, Helen (1986) BA, MLS, Brigham Young U., 1969, 1974.
- Howard, Donald Hugh (1969) BA, U. of Idaho, 1963; MLS, U. of California, Berkeley, 1964.
- Jenson, Gloria Dawn (1954) BS, Brigham Young U., 1950; MS, Columbia U., 1954.
- Jenson, Janet (1976) BA, MA, Brigham Young U., 1958, 1960; MS, Columbia U., 1966.
- Johansen, Kathleen D. (1986) BS, MLS, Brigham Young U., 1971, 1978.
- Jordan, K. Paul (1964) BS, Brigham Young U., 1964; MLS, U. of Southern California, 1969.
- King, Gail O. (1982) BA, U. of Colorado, 1970; MA, PhD, U. of Chicago, 1972, 1982.
- Lo, Howard, Wen-Hao (1969) BA, 1961; MLS, MA, Brigham Young U., 1969, 1985.
- Memmott, Howard Kirk (1973) BS, MLS, EdD, Brigham Young U., 1966, 1973, 1986.
- Miner, Afton McGrath (1972) BA, Arizona State U., 1954; MLS, U. of California, Berkeley, 1963.
- Norton, Beverly (1986) BA, MLS, Brigham Young U., 1984, 1985.
- Silverman, Randall H. (1986) BA, Evergreen State Coll., 1978; MLS, Brigham Young U., 1986.
- Slater, Bill G. (1970) BA, MLS, Brigham Young U., 1969, 1975.
- Swenson, Dale (1984) BS, U. of Utah, 1979; MLS, Brigham Young U., 1985.
- Westover, Keith R. (1991) BA, MLS, Brigham Young U., 1969, 1970; MA, Indiana U., 1975.

- Wiley, Kayla (1986) BA, MLS, Brigham Young U., 1978, 1987.
- Winkler, Albert L. (1979) BA, MA, Utah State U., 1973, 1976; MA, Catholic U. of America, 1980; MLS, PhD, Brigham Young U., 1981, 1982.
- Yang, Basil P. (1981) MLS, MA, Brigham Young U., 1974, 1984.

Assistant Librarians

- Adams, K. Haybron (1976) BS, MLS, Brigham Young U., 1972, 1973.
- Angerhofer, Paul J. (1988) BA, MLS, Brigham Young U., 1985, 1988.
- Barainca, Denice (1986) BA, MLS, Brigham Young U., 1986, 1991.
- Barrios, Pamela C. (1990) BA, Lehman College of City U. of New York, 1977.
- Bell, Catherine A. (1990) BA, U. of Texas, Austin, 1984.
- Bernards, Dennis (1986) BS, MLS, Brigham Young U., 1972, 1991.
- Bybee, Howard C. (1988) BA, Brigham Young U., 1968; MA, Duke U., 1971; MS, MLS, Brigham Young U., 1987, 1988.
- Cardon, Laureen (1989) BS, MLS, Brigham Young U., 1981, 1985.
- Casper, Gordon C. (1967) BS, MLS, Brigham Young U., 1964, 1969.
- England, Mark M. (1987) BS, U. of Minnesota; MLS, Brigham Young U., 1987.
- Flick, Roger C. (1970) BS, MLS, Brigham Young U., 1966, 1973.
- Frade, Patricia A. (1992) BS, MLS, Brigham Young U., 1981, 1986.
- Halliday, Irene (1992) BS, MLS, Brigham Young U., 1963, 1988.
- Houze, Annick (1988) BA, MLS, Brigham Young U., 1985, 1987.
- Jensen, Richard D. (1971) BS, MLS, Brigham Young U., 1970, 1976.
- Kupitz, Carla (1988) BA, U. of Utah, 1979; MLS, Brigham Young U., 1987.
- Nixon, John D. (1961) BS, Brigham Young U., 1957; MA, U. of Denver, 1961.
- Parkinson, Diane R. (1989) BS, MLS, Brigham Young U., 1986, 1989.
- Ramsey, Christiane E. (1989) BA, MA, Brigham Young U., 1984, 1989.
- Russell, Kirk A. (1989) BA, MLS, Brigham Young U., 1987, 1991.
- Soares, Richard E. (1987) BA, Chico State U., 1985; MLS, San Jose State U., 1986.
- Turnblom, Grant W. (1969) BA, MLS, Brigham Young U., 1964, 1969.
- Wells, Thomas (1986) BS, MLS, Brigham Young U., 1982, 1989.

Wright, John (1992) BS, MLS, Brigham Young U., 1987, 1989.

Affiliate Librarian

Baer, Lisa (1991) BS, Brigham Young U., 1989.

Emeriti

Astin, J. Sterling (1969) BS, U. of Utah, 1940.

Earl, Naomi Rich (1937) BS, Brigham Young U., 1931.

Fairchild, Vanda F. (1965) BS, Utah State U., 1939.

Jensen, Allene (1961) BA, MS, U. of Utah, 1930, 1957.

Lamson, Merle E. (1961) AS, Yakima Valley Coll., 1953; BS, Brigham Young U., 1955; MLS, Columbia U., 1960; PhD, U. of Utah, 1975.

McGee, Donna (1986) BA, Brigham Young U., 1976.

Moffat, Helen (1975) BA, U. of Utah, 1942; MA, Arizona State U., 1955; MA, U. of Denver, 1958.

Nelson, Donald K. (1961) BS, Utah State U., 1938; MLS, MBA, U. of Denver, 1945, 1948.

Nielson, Eve (1949) BS, Utah State U., 1945; MS, U. of Southern California, 1959; AS, Brigham Young U., 1963.

Pope, Elizabeth D. (1964) BA, MLS, Brigham Young U., 1943, 1971.

Richey, Melva (1985) BS, Utah State U., 1943; MLS, Brigham Young U., 1976.

Robertson, Russell C. (1973) BA, U. of California, Los Angeles, 1949; MLS, U. of Illinois, 1960; MEd, Brigham Young U., 1977.

Scott, Hollis (1961) BS, Brigham Young U., 1949.

Smith, Carol T. (1949) BA, Brigham Young U., 1940; MS, U. of Southern California, 1962.

Webb, Beth R. (1966) BA, Brigham Young U., 1940; MA, U. of Denver, 1944.

Services Available on Campus

Academic Support Office

John M. Call, Administrator (151 SWKT, 378-2723)

The primary purpose of the Academic Support Office is to reduce the incidence of academic failure among qualified students. Various programs involving faculty cooperation, policy development, student contact and counseling, research, and remedial or preventive activities are administered and developed by this office.

Students with deficient academic standing are notified after each semester or term of attendance. This notification and the follow-up contact program are positive in nature and are oriented toward aiding students to increase their academic effectiveness and eventually to attain their educational goals.

Specialized counseling and referral services are provided by personnel in the Academic Support Office. Faculty members may request information about the academic status of a student as well as materials to improve study skills. Teachers are also encouraged to refer students who show academic deficiencies to the Academic Support Office for help.

See the Academic Standards section of this catalog for details of BYU's academic standards.

Alumni Association

Background

The Alumni Association was organized in 1893 to promote the general welfare of Brigham Young University. Today it serves more than 282,000 alumni and provides several valuable services and programs for students still at the university.

Membership Prerequisites

All former students are eligible for membership in the Alumni Association. There are no dues or membership drives; the association conducts solicitation for contribution to the BYU Senior Pledge Fund and special projects.

Services to Students

Services to students on the campus include a college-related student/alumni council, BYU Alumni Association Replenishment Grant (for students), meeting facilities in the Alumni House, the annual commencement banquets, the commencement checklist for graduates, and operation of the Student/Alumni Council.

Services to Alumni

Services to alumni include many on-campus programs during Homecoming and commencement and other times of the year; alumni receptions held throughout the world; alumni travel programs with or without credit; the *BYU Today* magazine (sent twice a year to each member of the association); the Aspen Grove Family Camp, located behind Mt. Timpanogos; low-cost term life insurance programs; a BYU-oriented merchandising program; and career counseling and job placement assistance.

Information

Obtain further information on these programs and any others by contacting the Alumni Association, Alumni House, 378-4663 or 1-800-437-4663.

Bookstore

The BYU Bookstore, located in the Ernest L. Wilkinson Center, offers a variety of merchandise and services to students, faculty, and staff. Textbooks; school supplies; general books; computer hardware and software; gift and card items; candy, snacks and refreshments; men's and women's clothing and accessories; photo supplies and processing; notions; music, video, and television equipment and supplies; sports clothing and BYU specialty sportswear; and engineering and art goods are available in the store.

The Bookstore also offers such services as check cashing; money orders; travelers checks; individual orders for books and merchandise; gift wrapping; packaging, mailing, and shipping; magazine subscriptions; layaway; and rentals by the day, week, month, block, or semester. The main Bookstore is open Monday through Friday from 7:50 a.m. to 6:00 p.m. and

Saturdays from 10:00 a.m. to 6:00 p.m. The Bookstore also has a convenience store with hours from 7:30 a.m. to 10:00 p.m. Monday through Friday on regular school days. For further information call 378-5637.

Campus Visits

Students desiring to visit campus are encouraged to schedule a tour through the Office of School Relations—Campus Visits, Visitors Center (VCTR), 378-4431. Daily tours are available at 9:00 a.m., 12:30 p.m., and 2:00 p.m. Tours are tailored to the individual student's needs, and appointments with advisement centers can be arranged as requested.

Comprehensive Clinic

Leslie L. Feinauer, Director (244 TLRB, 378-7759)

The Comprehensive Clinic is a research and training center that houses several of the clinical training programs of the university. These include clinical psychology, marriage and family therapy, social work, audiology and speech-language pathology, nurse practitioner training, LDS Social Services, and the research and staff development arm of LDS Social Services. Services of the Comprehensive Clinic are available to community people and BYU staff, faculty, couples, and families. These services include:

1. Counseling for depression, anxiety, low self-esteem, strong fears, marital discord, divorce adjustment, child behavior and family problems, premarital concerns, sexual dysfunction, adoption, foster care, and unwed mothers.
2. Auditory habilitation and biofeedback for headaches and pain, speech disorders, and voice disorders.
3. Evaluation of hearing loss, adequacy of hearing aids, learning disabilities, and physical health status.
4. Medical treatment, e.g., diagnosis and treatment of common illnesses and minor injuries, physical examinations, well child examinations, laboratory studies, and health counseling.

Depending on the services provided, fees may be charged. Family size and income, university affiliation, equipment utilized, and other factors are considered in the fees, which range from no charge to full professional fees.

Computers

The use of personal computers has become important for every student at the university. Students are encouraged to obtain their own personal computers, but even with decreasing prices they are costly. Therefore, the university provides access to personal computers for composition (word processing) on a fee basis. The cost is low, but there may be the inconvenience of some waiting. Several colleges provide computer access for their students.

Students who are considering the purchase of a personal computer should note the following information:

BYU offers a significant savings on the purchase of various computer hardware and software products. These educational discounts are available to registered students, faculty, and staff. Some vendors do require full-time status.

For specific information contact the Bookstore at 378-3740.

Counseling and Development Center

David M. Sorenson, Director (169 SWKT, 378-6291)

The Counseling and Development Center, a department of Student Life, supports Brigham Young University's mission to help students realize their full potential. It is recognized that reaching such potential involves growth and development in emotional, spiritual, social, and physical areas as well as the intellectual area. As students experience the challenge of a university education, they often encounter problems in one or more of these areas that can be disruptive to their happiness and progress in school. The professionally trained staff at the Counseling and Development Center offers students a variety of services to help solve such problems when they occur.

Academic Support

(151 SWKT, 378-2723)

Academic counseling is available for students who are experiencing difficulty with their studies. This counseling includes help in working through and overcoming obstacles to successful academic performance. Information about the university's academic standards, a student's academic standing, or help with learning

problems is available at this office as well. (See also Academic Standards in the Policies and Procedures section of this catalog.)

Career and Learning Information Center

(100 SWKT, 378-2689)

Printed, audiovisual, and computer-generated information about career options and learning skills are available in the Career and Learning Information Center (CLIC). These materials provide useful information for making educational and career decisions and for acquiring skills needed in the academic setting.

Career Planning Services

(149 SWKT, 378-2723)

Career counseling is available to help students explore their academic majors, career options, and long-term career development. Interest inventories and other tests are available to assist students in making decisions about career options.

Interpersonal Relations Skill Training

(149 SWKT, 378-3035)

The Counseling and Development Center offers five interpersonal skill laboratories in cooperation with various academic departments. Students learn skills in interviewing, group interaction, team building, social development, and leadership.

Open Major Advisement

(151 SWKT, 378-3826)

This office offers advisement to students who have not declared a major. It also provides help in selecting classes, meeting General Education requirements, and declaring or changing majors. (See also the Student Life and Student Development sections of this catalog.)

Personal Counseling Services

(149 SWKT, 378-3035)

Full-time day students can receive help in dealing effectively with personal problems that interfere with their education. Counseling is provided by professional counselors who operate within established limits of confidentiality. Without written permission from the student, personal information is not released to any third party. Individual and group counseling services are oriented toward short-term intervention and helping students develop self-reliance. Stress management, including biofeedback training, is offered as part of the counseling service.

Testing Services

(104 SWKT, 378-2688)

Tests and inventories are available to help students acquire personal information about career interests, learning styles, emotional adjustment, and personality. Most of the tests and inventories require a referral from a counselor, advisor, or class instructor to ensure an appropriate interpretation and availability of resources.

Tutoring Services

(100 SWKT, 378-2689)

Students are advised to use all possible help from the class instructor and, where available, from "help sections" of the course before employing a tutor; however, tutoring services are available for students needing help beyond regular classroom instruction. The tutors are students who have proved competent in the subject and who have been authorized by the department responsible for that subject. Payment for tutors obtained through Tutoring Services is the responsibility of the student served.

Women's Services and Resources

(173 SWKT, 378-4877)

The CDC Women's Services and Resources is a comprehensive referral source for all women on the BYU campus. Aid in locating and utilizing needed services and programs sponsored by campus departments and community agencies is furnished, as well as specific information and support for nontraditional students.

Workshops

(149 SWKT, 378-3035)

A variety of workshops are offered each semester to help students improve their academic, social, and interpersonal skills. Topics such as test taking, notetaking, time management, stress management, choosing a major, self-awareness, and assertiveness are addressed.

Disabled Student Support

Teri Pratt (380 SWKT, 378-2767)

The purpose of this office is to assure that disabled students are provided access to university programs. A variety of services and extensive information are available.

Mobility impaired students are encouraged to seek help in ensuring the accessibility of classes and other facilities. Hearing impaired students may obtain the services of qualified sign language interpreters and TDD communications by contacting this office. A list of volunteer readers is maintained for visually impaired or learning disabled students. Library lockers, study rooms, VisualTeks, taped textbooks, cassette players, braille writers, and an adapted computer

with enlarged characters and speech synthesis are also available. In addition, help is offered in determining appropriate class loads and preparing for a career.

Equal Opportunity Office

D. Darlene Kelly, Manager (A-289 ASB, 378-6878)

It is the policy of Brigham Young University not to allow unlawful discrimination on the basis of race, color, national origin, religion, sex, veteran status, or disability in the academic or employment setting. This includes unlawful sexual harassment, which is a violation of university standards as well as state and federal laws and may be considered grounds for discipline. Persons who believe they have been unlawfully discriminated against or unlawfully sexually harassed should contact the Equal Opportunity Office, A-285 ASB, 378-6878.

ID Center

Nancy Carson (120-N ELWC, 378-5092)

The ID Center makes available to every BYU student a photo identification card with magnetic stripe. During the first week or two of each semester or term, the photo ID cards are produced and distributed to students in the Memorial Lounge and 394–396 Wilkinson Center. After that, the cards are distributed at the ID Center (120-N ELWC). ID card distribution serves as a screening time for the dress and grooming standards as outlined by the university.

Instructional Support Services

University Computing Services

Kelly C. McDonald, Executive Director (167 TMCB, 378-5025)

University Computing Services provides extensive computing, communications, and micrographics facilities to faculty, staff, and students. In addition to equipment, experienced personnel and a library of computer programs are available to help with particular problems or training.

Computer Consultation Center

Loralee Holt, Manager (156 TMCB, 378-2089)

The center provides the following free services: solutions to computer problems, software evaluation; data/disk recovery, prepurchase advice on software and hardware, help with popular computer programs, virus detection and eradication, and interim software updates of WordPerfect.

Consultants for the Amdahl 5880 are available in 154 TMCB, 378-4053.

Consultants for the IBM 3090 and VAX are available in 423-A CB, 378-6554.

Consulting on the use of statistical packages is available at 185 TMCB, 378-6504. Hours are posted in each consulting room.

Instructional Applications Services

Monte F. Shelley, Director (193-A TMCB, 378-7325)

Student and teacher evaluation services, computer training and research support, computer lab services, computer consultation services, and help developing computer-based curriculum materials are all offered by Instructional Applications Services.

McDonald Health Center

Dr. Denton J. Cameron, Director (T-112 MHC, 378-2771)

Gary Brimley, Associate Director (T-115 MHC, 378-2771)

Student health services are available at the Howard S. McDonald Health Center for all students, spouses, and dependents of students at rates lower than those the community offers. Any student can receive services at the Health Center regardless of the insurance policy they have, although students can receive health care at even a greater discount by utilizing the student insurance.

Health services are available from 8:00 a.m. to 6:00 p.m. Monday through Fridays and 8:00 a.m. to noon on Saturdays; the Health Center is closed on Sundays and holidays. Regular clinic hours are from 8:00 a.m. to 5:00 p.m. Monday through Friday, and urgent care services are available from 8:00 a.m. to 6:00 p.m. Monday through Saturday. Students can schedule an appointment by calling 378-2771.

Some of the services available at the Health Center include:

1. Consultation with a physician or nurse-practitioner
2. Immunizations
3. Pharmacy
4. Physical therapy
5. Laboratory tests
6. X-ray examinations
7. Urgent care
8. Consultation with specialists in allergy, EENT, ophthalmology, orthopedics, internal medicine, podiatry, psychiatry, surgery, rheumatology, and gynecology.

For more information contact the Health Center. The Health Center is bound by the laws of confidentiality, and personal information will not be released to a third party without written permission from the patient.

Multicultural Programs/Special Populations

Rush Sumpter, Director (329 ELWC, 378-3111)

Multicultural Programs/Special Populations helps American Indian, American minority, and other multicultural students succeed in college work by providing certain support functions critical to their welfare at the university. These functions include the following areas:

International Student Office

Enoc Q. Flores (350 SWKT, 378-2695)

This office provides advisement and services to all international students, visitors, and exchange scholars; aliens with permanent residence in the United States; and interested parties within the university community.

Academic Support Office

Darlene Oliver (350 SWKT, 378-3821)

The Academic Support Office offers all minority and international students academic and personal advisement and tutoring help. This office also sponsors summer programs for minorities.

Financial Aid

Ken Sekaquaptewa (353 ELWC, 378-3065)

This office assists all Lamanite students and other American minority students in locating possible financial sources for grants and scholarships; helps American Indian students secure tribal scholarships; and provides limited work-study opportunities.

Student Service Association

Thomas Kallunki (423 ELWC, 378-3126)

The Lamanite Generation performing group and the *Eagle's Eye* newsletter are coordinated by the Student Service Association. It also advises campus ethnic organizations and offers leadership and involvement to students through programs such as Black Awareness Week, International Week, and Lamanite Week.

Placement Center

(D-240 ASB, 378-3000)

The Placement Center can best assist BYU graduates with their job search when graduating students register with the center during the fall semester of the year in which they plan to graduate.

Students registering with the Placement Center gain access to many valuable services, including individual and group counseling, on-campus student interviews with employer representatives, and information about specific job opportunities submitted by

employers from business, industry, education, and government. The Placement Center also maintains a complete collection of books, articles, magazines, brochures, and videotapes relating to employing organizations. Materials and workshops are available on such matters as how to write letters of application, prepare resumés, and conduct oneself in personal interviews.

To maximize the number of employment contacts available to graduating students, the Placement Center works in close cooperation with personnel in each academic department. Close contacts are also maintained with the college advisement centers.

Preprofessional Programs

Students can complete preprofessional study at BYU before professional academic training at BYU or elsewhere. There are no majors at the university in these preprofessional areas because professional schools generally make no specification of majors. Students may major in any department but should select majors and related preprofessional studies as outlined below.

Architecture

John J. Kunzler, Advisor (270 CB, 378-4326)

Preaditecture students have several options, depending on the intended future architectural degree. One approach is to study only a year or two at BYU before transferring to another institution to pursue a baccalaureate degree in architecture. In these instances, students should plan their period of study at BYU to include, as nearly as possible, course work that will transfer directly into the future architecture program.

Students who plan to obtain a graduate degree or certificate in architecture elsewhere following completion of an undergraduate degree at BYU are advised to consider a baccalaureate program in art, civil engineering, construction management, or design. The choice depends on career and personal interests, academic preparation, and the requirements of the intended architectural program. Students pursuing this approach should select their future program early and become familiar with all requirements, thereby avoiding potential disappointments.

Dentistry

Don Bloxham, PhD, Advisor (380 WIDB, 378-3044)

The acceptance rate of BYU applicants to dental school for the last several years has been above 90 percent.

Both high grades and Dental Admission Test scores are helpful for admission to a good dental school. Minimum course requirements for most dental schools are: Engl 115, 316 (or 312 or 315), Math 110, Chem

105-107, 351-353, Phscs 105-108, Biol 130, and Zool 460. Zool 229, 329, and 429 are highly recommended. Consult dental school catalogs for other prerequisites (380 WIDB).

A few dental schools will accept BYU students after three years of pre dental education. A BS degree in biology from BYU is still possible after completion of the first year of dental school. Others may wish to graduate from BYU first. Check in 380 WIDB for details.

Plan major requirements with the departmental advisor and pre dental study with the pre dental advisor.

Law

Eileen Crane, Prelaw Advisor (Office: 2240 SFLC, 378-2318. Mailing address: Box 524 SWKT.)

The grade point average and Law School Admissions Test score are the primary factors on which law schools base their admission decisions. Law schools require a bachelor's degree but no specified majors; the presence or absence of particular courses does not affect admission decisions.

Students should select a major field that interests them and that will provide an alternative vocation should they not finish law school. Even though no particular prelaw major is best for all students, students should emphasize intellectually demanding courses in the major and in their other studies. On the one hand, these ought to include subjects most relevant to the study and practice of law: the history, government, economics, and business out of which the law comes and with which it deals. On the other hand, these courses ought to include the skills expected of law students and lawyers: the ability to analyze, reason, read carefully, think abstractly, and speak and write precisely—which might well be developed in many intellectually stimulating courses and certainly in those teaching English language and literature, philosophy, debate and public speaking, and accounting.

For a personalized prelaw program, please contact the Prelaw Advisement Center. The prelaw advisor (1) prepares students to take the LSAT, (2) helps choose schools to apply to that are among the 175 accredited law schools in the U.S., (3) provides data on likelihood of acceptance, and (4) offers financial aid information for graduate school.

Students should strongly consider signing up for StDev 198R. This class is a prelaw seminar offered only the first block of fall and winter semesters that provides students with the most current prelaw information available. Through speakers and text students preview legal issues, including the writing and potential publication of law-related articles in the *Prelaw Review*.

Management

Gary C. Cornia, Associate Dean (730 TNRB, 378-6822)

Advisors:

MBA Program Director, Gary F. McKinnon (640 TNRB, 378-4933)

MPA Program Director, N. Dale Wright (760 TNRB, 378-4221)

MAcc Program Director, W. Steve Albrecht (540 TNRB, 378-3154)

MOB Program Director, Alan L. Wilkins (790 TNRB, 378-2664)

The programs in the Marriott School of Management are designed to prepare qualified students for rewarding careers in management and administration. Classes and study group activities stress the acquisition of professional managerial attributes that will enable students to obtain work in public, private, and not-for-profit organizations. High ethical values and behavior are reinforced.

Applicants to the programs are carefully evaluated in four areas: (1) previous academic performance; (2) completion of a bachelor's degree (except for students applying to the Master of Accountancy Program); (3) test scores on the Graduate Management Admission Test; and (4) work experience, extracurricular activities, leadership potential, motivation, and maturity.

Marriott School of Management programs, leading to the master of business administration, master of public administration, and master of organizational behavior degrees, actively recruit good students from many undergraduate majors. Applicants to the Master of Accountancy Program, who are required to have previous educational background in accounting, can be admitted as early as their senior year. Interested students should contact the specific program advisor to determine any prerequisites.

Medicine

Don Bloxham, PhD, Advisor (380 WIDB, 378-3044)

Students who wish to enter medical school should plan to complete four years of college in a rigorous program of study. Successful applicants have earned excellent grades and scores on the Medical College Admission Test.

Courses needed to fulfill the requirements of most medical schools are: Engl 115, 316 (or 312 or 315); Math 110, 111; Chem 105-107 (or 111, 112, 226); 351-353; Phscs 105-108 (or 121, 221); Biol 130 and Zool 460. Zool 139, 339, and 439 are highly recommended. The major selected should reflect interests and allow for an alternate career. Any major can serve as a premedical major.

Plan major requirements with the departmental advisor and premedical study with the premedical advisor. The acceptance

rate of BYU applicants to medical school for 1992 was 55 percent, which is above the national average, but the percentage is decreasing because the number of applicants nationwide is increasing.

Physical Therapy

Shane Schulthies, Advisor (122 RB, 378-3982)

Physical therapy graduate programs base their admissions on cumulative GPA, the Graduate Record Exam, and clinical exposure, plus a BS degree in a preprofessional course of study. Competition is arduous, and a student must maintain a 3.5 or better cumulative GPA. A transfer student (30 hours or more) must have a 3.5 cumulative GPA to be admitted to the program.

Basic course work should include: mathematics, two semesters; physics, two semesters; chemistry, two semesters; psychology, two semesters; and zoology, two semesters.

The acceptance rates into physical therapy graduate programs for students graduating in exercise science has been maintained in the 80th percentile for many years.

Veterinary Medicine

Beverly L. Roeder (386 WIDB, 378-6873) and
Richard N. Thwaits (357 WIDB, 378-6872),
Advisors

Competition for freshman class spaces in veterinary school is keen, and students should expect to achieve above a 3.5 GPA. Many successful applicants have completed the bachelor's degree. Because course requirements differ with individual veterinary schools, students should familiarize themselves with entrance requirements for the schools to which they will apply.

Course work typically includes the following: English, two semesters; mathematics, one semester; chemistry, five semesters; biology, three semesters; physics, two semesters; humanities, three semesters; social science, three semesters; and statistics, one semester. It is also important to have experience working with veterinarians and with animals.

Students are encouraged to incorporate the preveterinary curriculum into an academic program leading to a career alternative.

Biomedical Engineering, Dental Hygiene, Optometry, Pharmacy, Physician's Assistant, and Podiatry

Don Bloxham, PhD, Advisor (380 WIDB, 378-3044)

Students who are interested in the above health professions may receive help in planning preprofessional course work and applying to the appropriate professional and graduate schools. Catalogs and other materials are available in the Health Professions Advisement Office, 380 WIDB.

Risk Management and Safety

J. Wesley Sherwood, Managing Director
(TOMH, 378-4468)

The Risk Management and Safety Department provides safety education to protect students and guests while on campus. The department accomplishes this through hazcom training for the safe use and handling of hazardous materials; dosimetry badges for use in labs where ionizing radiation is present; driver training, including a van-driving course; and information and training on the use of fire extinguishers.

The Risk Management and Safety Department provides workers' compensation insurance for student employees working at Brigham Young University.

Services for Single Parents

A packet of information is available at the BYUSA secretary's desk on the fourth floor of the ELWC for individuals interested in networking with other single parents, obtaining information about available children's day care, or funding options for day care.

Student Employment Office

(C-40 ASB, 378-3561)

To be employed on campus all students must have a U.S. social security number. Students who are ready to seek employment should also bring proof of acceptance as a full-time student to the Student Employment Office.

Undergraduates and non-degree-seeking graduates are required to carry and maintain 8.5 credit hours per semester. Graduate students are required to carry 2 credit hours and be accepted into a graduate program. Secretarial applicants must take a test before applying for clerical positions on campus.

Certain governmental restrictions are placed on students from foreign countries. Some students are not eligible to obtain work permits until they have been in school for one semester. All foreign students are required to contact BYU International Student Support to determine their employment status.

Federal immigration regulations require everyone hired in the USA to prove work eligibility. A U.S. citizen may use a social security card, state-certified birth certificate, or U.S. passport. One of these documents, along with a current BYU identification card, will satisfy the immigration regulation. Foreign students need a current passport with attached I-94 or I-20 ID.

Finding a job depends on class schedule, skills, experience, and willingness to accept reasonable employment. Students will find it is a good idea to arrange their class schedule

so that a four-hour block is free the same time each day. Some of the most common work shifts are:

4:00 a.m.-7:00 a.m.
6:00 a.m.-10:00 a.m.
8:00 a.m.-12:00 noon
10:00 a.m.-2:00 p.m.
11:00 a.m.-3:00 p.m.
12:00 noon-4:00 p.m.
1:00 p.m.-5:00 p.m.

The university cannot guarantee a job to any student before arrival on campus. Because competition for jobs is keen, students would be wise to come to the university with enough money to support themselves until they find work.

Most jobs on campus are listed in the Student Employment Office. However, some departments hire skilled students without listing the positions with Student Employment. Academic departments select from their own students for reading, grading, and research assistant positions. The Missionary Training Center (MTC) accepts applications to fill teaching positions directly from returned missionaries or those who have native foreign language skills.

The Student Employment Office also receives and posts many jobs from off-campus employers. Students are encouraged to contact these employers directly.

Student Union: Ernest L. Wilkinson Center

Tamara M. Quick, Managing Director (329 ELWC, 378-3111)

The Ernest L. Wilkinson Center serves as the living room of the university, the center of college community life. The ELWC is a place where students may go to relax and participate in co-curricular out-of-class activities that will foster balanced growth and development.

The games center, craft and floral shop, copy center, photo studio, barber shop, ID center, post office, lost and found department, and outdoor rental area are all on the first floor. Facilities on the second floor include ballrooms, an art gallery, lounges, an information center, a television area, and a movie theater. The Bookstore and three restaurants are some of the Wilkinson Center's most important components, and other parts of the building house meeting rooms, student publications offices, and catering services.

Information Center

(Main Floor ELWC, 378-4313)

The Information Center answers questions for hundreds of people each day. It has current pamphlets, directories, catalogs, class schedules, bus schedules, and other informational packets. The center also handles the televisions and reading material

for the Memorial Lounge. Persons wishing to advertise any university-related activity or event should contact the Information Center directly. Fall/Winter hours are Monday through Friday from 8 a.m. to 8 p.m. and Saturday from 9 a.m. to 5 p.m. Spring/Summer hours are Monday through Friday from 9 a.m. to 6 p.m. and Saturday from 9 a.m. to 5 p.m.

Lost and Found

(118 ELWC, 378-3024)

Lost and Found serves both those who have lost items of value and those who find them. The university strongly urges students and others to put their names and other personal information on their possessions and encourages everybody to turn found items in to Lost and Found immediately.

Approximately 60 percent of the items turned in to Lost and Found are quickly returned to their owners. All unclaimed items are held for two months or longer until they are auctioned or otherwise sold at a Lost-and-Found Sale. Such sales are publicized and held two to three times a year. These sales give students an opportunity to buy needed items at a low cost.

Student Service Association (BYUSA)

(Fourth Floor, ELWC, 378-3901)

The mission of the Student Service Association is to strengthen students in their social relationships, civic duty, and service to mankind. Through student leadership, the university community works together to achieve our goal that all who "enter to learn" will be prepared by training and experience to "go forth to serve."

Any student who wants to serve on the Homecoming committee; as a Y-Group leader, a conference organizer, a reader for the blind, a sub for Santa, a campus party planner, a financial manager, a publicity chair, or a campus spirit and traditions specialist; in a campus club, in Lamanite or International Week, in Spirit of the Y Week, or in Y Day is invited to become involved.

Ideas for making our university community a better place to learn and to live are also warmly accepted. Students may either come to the Involvement Office or call. There is a place for everyone in the BYU Student Service Association.

Telephone and Data Communications

Wayne Voorheis, Sr., Manager (310 SFLC, 378-7311)

This office provides the university, including *on-campus* student housing, with voice and data communications, local and long-distance telephone services, and telephone-mail (PhoneMail) service. Questions regarding on-campus student telephone services should be referred to 378-7813. To obtain services or to make changes to telephone or data services call 378-7524. Changes to the campus telephone directory or questions regarding its publication should be referred to 378-7384.

University Police, Traffic, and Security

The University Police Department is established for the benefit and protection of students, faculty, and staff. The department's state-certified police officers are entrusted with enforcing laws and, when applicable, campus rules and regulations. Non-certified security, traffic, and parking control officers are also utilized by the university to enforce campus rules and regulations.

All persons requiring emergency police assistance or fire or ambulance services should call 911. Receive nonemergency police assistance by calling 378-2222 or by visiting the department at B-66 ASB.

Parking control is the responsibility of the University Police Traffic Division, which is located east of the Carillon Bell Tower at 700 East on 1430 North. All BYU students must register their motor vehicles with the Traffic Division if they intend to park in student lots during restricted hours (7:00 a.m. to 4:00 p.m. Monday through Friday).

Automobile Registration

To obtain a parking permit, the following must be presented at the Traffic Office between the hours of 7:30 a.m. and 5:00 p.m. Monday through Friday:

1. Current state vehicle registration certificate
2. Proof of emissions compliance
3. The appropriate fee
4. University identification card
5. Room key or contract (on-campus single housing only)

Parking Permits

Zone G	Students living off campus	*\$40.00
Zone Y	Students living off campus	15.00
Zone Y	Student motorcycle	10.00
Zone R	Students living off campus	5.00
Zone C	On-campus single housing	7.50
Zone H	Disabled	Variable

*Zone G, Y, or R permits are valid in all student lots (except C zones) from the beginning of fall semester to the end of the next summer term.

Out-of-State Plates

Students driving vehicles with out-of-state plates must obtain a Utah state nonresident student permit (cost \$1) available at the Traffic Office. This permit is prerequisite to buying a BYU parking permit.

If a student is married and his or her spouse is a nonstudent employed full-time, then the vehicle must be licensed in the state of Utah and cleared for tax payment. This is done at the Utah Motor Vehicles Division, 150 East Center, Provo.

Faculty and staff employees with out-of-state plates must license their vehicles with the state of Utah and clear them for tax payment before they can receive their parking permits.

Bicycle Registration

All bicycles operated or parked on campus must be licensed with a Utah County municipality. Provo city licenses are available at the Traffic Office for a fee of \$1.

Bicyclists must:

1. Always park bicycles in racks.
2. Never ride on sidewalks during class breaks.
3. Yield to pedestrians.
4. Obey *all* traffic rules.

Bicycles not parked in racks will be impounded. BYU will not be responsible for cut locks, chains, or cables.

Other Regulations

Traffic regulation information may be obtained from the Traffic Office. It is the responsibility of all students, faculty, and staff members to obey all traffic rules and regulations.

Questions may be directed to Traffic Office personnel at 378-3906.

Veterans Support

(B-150 ASB, 378-2768)

The Veterans Support Office certifies the enrollment of eligible veterans or their dependents for educational benefits from the Veterans Administration. Information and help in applying for these benefits are available from this office.

Accreditation and Affiliations

Brigham Young University is fully accredited by the Northwest Association of Schools and Colleges. In addition, many professional programs of the university are reviewed, evaluated, and accredited by national and state associations and boards.

The following organizations have given full accreditation to related programs at the university:

Accreditation Board for Engineering and Technology, Inc. (ABET) for the four-year programs leading to bachelor of science degrees in chemical engineering, civil engineering, electrical engineering, mechanical engineering; (TAC/ABET); design engineering technology, electronics engineering technology, and manufacturing engineering technology.
Accreditation Council, National Recreation and Park Association
Accrediting Council for Education in Journalism and Mass Communications
American Academy of Nurse Practitioners
American Assembly of Collegiate Schools of Business
American Association for Marriage and Family Therapy
American Bar Association
American Council for Construction Education
American Dietetics Association
American Library Association
American Medical Association Committee on Allied Health Education and Accreditation.
American Political Science Association
American Psychological Association
American Research Center in Egypt
American Speech, Language, Hearing Association
American Veterinary Medical Association
Association for Public Policy Analysis and Management
College Reading and Learning Association
Computing Science Accreditation Board
Council of Baccalaureate and Higher Degree Programs of the National League for Nursing
Council on Social Work Education
International Association of Counseling Services
National Accrediting Agency for Clinical Laboratory Sciences
National Association for the Education of Young Children

National Association of Schools of Art and Design
National Association of Schools of Dance
National Association of Schools of Music
National Association of Schools of Public Affairs and Administration
National Association of Schools of Theatre
National Association of State Directors of Teacher Education and Certification
National Athletic Trainers' Association
National Council for Accreditation of Teacher Education
National Dance Association
National Environmental Health Association
Northwest Association of Schools and Colleges
Northwest Association of Secondary and Higher Schools
Utah State Bar Association
Utah State Board of Nursing
Utah State Department of Education
Utah State Department of Public Instruction in cooperation with the United States Office of Education for the training of vocational home economics teachers.

Brigham Young University is affiliated with the following educational and professional associations:

Administrative Management Society
Academy of International Business
American Academy of Management
American Academy of Nurse Practitioners
American Accounting Association
American Advertising Association
American Advertising Federation
American Agricultural Economics Association
American Alliance for Health, Physical Education, Recreation, and Dance
American Anthropological Association
American-Arab Affairs Council
American Association for Advances in Health Care Research
American Association for Artificial Intelligence
American Association for Construction Education
American Association for Counseling and Development
American Association for Humanistic Psychology
American Association for Italian Studies
American Association for Leisure and Recreation
American Association for the Advancement of Science

American Association for the Advancement of Slavic Studies
American Association of Adult and Continuing Education
American Association of Colleges for Teacher Education
American Association of Colleges of Nursing
American Association of Collegiate Registrars and Admissions Officers
American Association of Petroleum Geologists
American Association of Physics Teachers
American Association of Presidents of Independent Colleges and Universities
American Association of Real Estate Appraisers
American Association of School Administrators
American Association of Teachers of Arabic
American Association of Teachers of French
American Association of Teachers of German
American Association of Teachers of Italian
American Association of Teachers of Slavic and East European Languages
American Association of Teachers of Spanish and Portuguese
American Association of University Women
American Business Law Association
American Chemical Society
American College of Health Administrators
American College of Nutrition
American College of Sports Medicine
American College Personnel Association
American Comparative Literature Association
American Council for the Teaching of Foreign Languages (ACTFL)
American Council of Teachers of Russian
American Council on Education
American Crystallographic Association
American Economics Association
American Educational Research Association
American Film Institute
American Finance Association
American Geophysical Union
American Historical Association
American Hospital Association
American Institute for Maghribi Studies
American Institute of Certified Public Accountants
American Institute of Chemical Engineers
American Institute of Design and Drafting
American Institute of Nutrition
American Institute of Physics
American Library Association
American Management Association
American Marketing Association

Accreditation and Affiliations

- American Mathematical Society
 American Newspaper Publishers Association
 American Nurses Association
 American Philological Association
 American Physical Society
 American Political Science Association
 American Psychological Association
 American Public Radio
 American Public Television Association
 American Society for Clinical Nutrition
 American Society for Engineering Education
 American Society for Public Administration
 American Society for Quality Control
 American Society of Biochemistry and Molecular Biology
 American Society of Civil Engineers
 American Society of Eighteenth-Century Studies
 American Society of Mammologists
 American Society of Mechanical Engineers
 American Society of Microbiology
 American Society of Public Accountants
 American Society of Training and Development
 American Sociological Association
 American Statistical Association
 American Taxation Association
 American Theatre Association
 American Translators Association
 American Women in Radio and Television
 Archaeological Conservancy, The
 Associated General Contractors of America
 Associated Writing Programs
 Association for Asian Studies
 Association for Business Communication
 Association for Childhood Education International
 Association for Comparative Studies
 Association for Computational Linguistics
 Association for Computers and the Humanities
 Association for Computing Machinery
 Association for Consumer Research
 Association for Counselor Education and Supervision
 Association for Educational Communications and Technology
 Association for Library and Information Science Education
 Association for Literary and Linguistic Computing
 Association for Mormon Counselors and Psychotherapists
 Association for Systems Management
 Association of American Colleges
 Association of American Law Schools
 Association of American University Presses
 Association of Asian Studies
 Association of Baccalaureate Social Work Programs
 Association of Continuing Higher Education
 Association of Departments of English
 Association of Departments of Foreign Languages
 Association of Interior Designers
 Association of Psychology Internship Centers
 Association of Research Libraries
 Association of Supervision and Curriculum Development
 Association of Teacher Educators
 Association of Teachers of Chinese
 Association of Teachers of Japanese
 Association of University Programs in Health Administration
 Association of Western Universities
 Bibliographic Center for Research, Rocky Mountain Region
 Broadcast Education Association
 Center for Applied Linguistics (CAL)
 Center for Arabic Study Abroad
 Center for International Scholarly Exchange (CISE)
 Center for Research Libraries
 Changes in Liberal Education
 College and University Machine Records Conference
 College and University Personnel Association
 College Art Association
 College Entrance Examination Board
 College Media Advisors
 College Placement Council
 Computer-assisted Language Instruction Consortium (CALICO)
 Computer Science Accreditation Commission
 Computing Sciences Accreditation Board
 Conference on Christianity and Literature
 Congress on Research in Dance
 Consumer Research Association
 Council for European Studies
 Council for Programs in Technical and Scientific Communication
 Council for the Advancement and Support of Education
 Council of Graduate Departments of Psychology
 Council of Graduate Schools in the United States
 Council on Social Work Education
 Data Processing Management Association
 Decision Sciences Institute
 Econometric Society
 Economic and Business History Society
 Economic History Association
 EDP Auditors Association
 Educational Films Library Association
 European Accounting Association
 European Association of Exploration Geophysicists
 Federation of American Societies for Experimental Biology
 Federation of Schools of Accountancy
 Financial Management Association
 Geological Society of America
 German Studies Association
 Goethe Institute (U.S. and West Germany)
 Graduate Management Admissions Council
 Health Care Financial Association
 History of Economics Society
 Industrial Relations Research Association
 Institute of Electrical and Electronic Engineers
 Institute of Food Technologists
 Institute of Internal Auditors
 Institute of Management Sciences
 International Association for Financial Planning
 International Association for Korean Language Educators (IAKLE)
 International Association for Mass Communication Research
 International Association of Learning Laboratories
 International Association of Scholarly Publishers
 International City Management Association
 International Comparative Literature Association
 International Conference for Computers in the Humanities
 International Congress of University Adult Education
 International Newspaper Advertising and Marketing Executives
 International Personnel Management Associations
 International Public Relations Association
 International Reading Association
 International Studies Association
 Joint National Committee for Languages
 Linguistic Society of America
 Marketing Science Institute
 Mathematical Association of America
 Medieval Academy of America
 Middle East Studies Association of North America
 Mineralogical Society of America
 Modern Language Association
 Mountain Plains Adult Education Association
 Mountain Plains Library Association
 Music Educators National Conference
 Music Teachers National Association
 National Academic Advising Association
 National Accrediting Agency for Clinical Laboratory Sciences
 National Art Education Association
 National Association for Home Builders
 National Association for Institutional Research
 National Association for Internships and Experiential Education
 National Association for Physical Education in Higher Education
 National Association for Schools of Dance
 National Association for the Education of Young Children
 National Association of Accountants
 National Association of Art Administrators
 National Association of Broadcasters
 National Association of Business Economists
 National Association of Certified Fraud Examiners
 National Association of Elementary Principals
 National Association of Foreign Student Affairs
 National Association of Independent Colleges and Universities
 National Association of Purchasing Management
 National Association of Schools of Dance
 National Association of Secondary School Principals
 National Association of Student Financial Aid Administrators
 National Association of Student Personnel Administrators
 National Athletic Trainers Association

- National Business Educators Association
 National Collegiate Honors Council
 National Commission of Accrediting
 National Commission on Cooperative Education
 National Computer Graphics Association
 National Council for Accreditation of Teacher Education
 National Council of Teachers of Mathematics
 National Council of University Research Administrators
 National Council on Family Relations
 National Council on Public History
 National Dance Association
 National Financial Association
 National Intramural Recreational Sports Association
 National League for Nursing
 National Network of Graduate Business School Women
 National Organization on Legal Problems in Education
 National Orientation Directors Association
 National Press Women
 National Recreation and Parks Association
 National School Boards Association
 National University Continuing Education Association
 Office Systems Research Association
 Operations Research Society of America
 Organization of American Historians
 Pacific Islands News Association
 Paleontological Society
 Phi Delta Kappa
 Pi Kappa Lambda
 Pi Mu Epsilon
- Public Radio News Directors Association
 Public Relations Society of America
 Public Relations Student Society of America
 Radio Television News Directors Association
 Research Libraries Group
 Rocky Mountain Mathematics Consortium
 Rocky Mountain Medieval and Renaissance Association
 Rocky Mountain Modern Language Association
 Royal Asiatic Society—Korean Branch
 Scientific Research Society, Sigma Xi
 Society for College and University Planners
 Society for Industrial and Applied Mathematics (SIAM)
 Society for International Development
 Society for Manufacturing Engineers
 Society for Research in Child Development
 Society for Scholarly Publishing
 Society for Technical Communication
 Society for the Advancement of Scandinavian Studies
 Society of Biblical Literature
 Society of Broadcast Engineers
 Society of Economic Paleontologists and Mineralogists
 Society of Exploration Geophysicists
 Society of Motion Picture and TV Engineers
 Society of Newspaper Design
 Society of Professional Journalists
 Society of Research Administrators
 Society of Vertebrate Paleontology
 Society of Women Engineers
 Southwest Conference on Language Teaching
- Southwest District American Alliance for Health, Physical Education, Recreation, and Dance
 Speech Communication Association
 Suburban Newspapers Association
 Systematics Association
 Teachers of English to Speakers of Other Languages (TESOL)
 Utah Academy of Sciences, Arts, and Letters
 Utah Advertising Federation
 Utah Association of Certified Public Accountants
 Utah Association of Sciences, Arts, and Letters
 Utah Foreign Language Association
 Utah Geological Association
 Utah Library Association
 Utah Museums Association
 Utah Press Association
 Western Association of Cooperative and Work Experience Educators
 Western Association of Graduate Schools
 Western Association of Schools and Colleges
 Western College Association
 Western College Physical Education Society
 Western Communication Educators Association
 Western Economics Association
 Western Governmental Research Association
 Western History Association
 Western Institutions of Nursing
 Western Interstate Commission on Higher Education
 Western Political Science Association
 Western Region Collegiate Honors Council
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